

CHICAGO OFFICE,
40 La Salle Street.

MILWAUKEE OFFICE,
124 Grand Avenue.

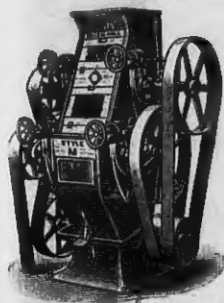


Published by
E. HARRISON CAWKER.

Vol. 25, No. 4. MILWAUKEE AND CHICAGO, AUG., 1888.

TERMS: \$1.00 a Year in Advance
Single Copies, 10 Cents.

EDW. P. ALLIS & Co.



GRAY'S PATENT NOISELESS BELT ROLLER MILL.—Style M.

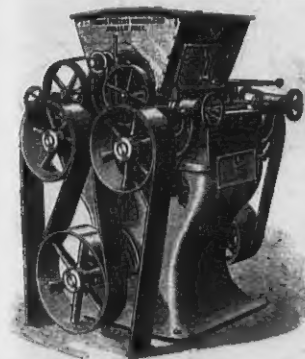
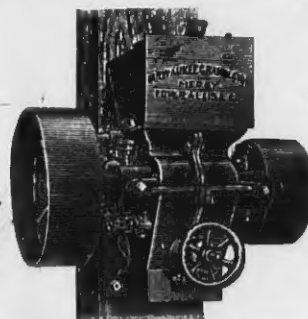
FOR GRINDING CORN, FEED, RYE, ETC.

As the fall season approaches, many millers are commencing to plan for the winter campaign, and are looking about to find a machine for feed grinding which will produce the best results and can be thoroughly relied upon. This machine is **Guaranteed** to fill the bill in every particular. It is simply the well-known Gray Roller Mill, with all its virtues, so constructed as to produce two reductions by one operation. There are two sets of rolls, one placed a little higher and to one side of the other. It will pay you to write for descriptive pamphlet and price of this machine, if you intend purchasing a feed grinding outfit.

THE MILWAUKEE GRANULATOR.

FOR GRINDING FEED, ETC.

This machine is a complete and perfect Roller Mill, of small size, and, as a result, small capacity. Its construction makes it very durable, easily managed and capable of doing good work with very little power. It is just the machine for a small capacity feed grinding outfit. A proof of its success is the rapidly increasing demand for it from all parts of the country.



Gray's Patent Noiseless Belt Roller Mills--Standard.

LICENSED BY THE CONSOLIDATED ROLLER MILL CO.

The Gray Rolls are so well known throughout the world, that it is unnecessary for us to comment upon their many virtues. Over 25,000 pairs are now in use, and the machines speak for themselves. We merely wish to call the attention of millers to "the old reliable" and say that, when you are in need of a perfect roll, we can furnish the Gray Machine, adapted to all requirements and conditions of grinding, and guarantee results.

RELIANCE WORKS, MILWAUKEE, WIS., U. S. A.

"GOLD SEAL" RUBBER BELTING,



OAK TANNED LEATHER BELTING.

372 and 374 EAST WATER STREET,
MILWAUKEE.

131 EAST THIRD STREET,
ST. PAUL.

201 NICOLLET AVENUE,
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ARKELL & SMITHS,

CANAJOHARIE, N. Y., U. S. A.

MANUFACTURERS OF

All Rope Manilla Paper Sacks

FOR

FLOUR AND CEMENT.

We Will Guarantee Our

DOUBLE EXTRA ALL ROPE PAPER SACKS



to carry the contents---either 75 pounds of Cement,
or 50 pounds of Flour---as far as can be trans-
ported in Cotton Sacks. : : : : : : : :



These sacks will stand abrasion, do not sift, are air-tight,
and proof against insects.

The United States Miller



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A COMBINED FLOUR MILL AND BAKERY, CHICAGO, ILL.

During a recent stay in Chicago, an invitation was extended to us to visit the combined flour mill and bakery of Mr. Fred Voltz in that city. Considering that examples of flour mills and bakery combined in one business are as rare in the United States as they are common in Europe, we gladly accepted the invitation; that such a combination can be successfully carried out, is apparent from the case described, where a baker is making all the best grade of flour he is consuming. The engraving shows the building, four stories high, and one side of which is occupied by the mill, while the other side serves for the bakery. The daily capacity of the mill is between seventy-five and one hundred barrels of flour, and the proprietor, Mr. Voltz, utilizes himself all the flour he makes, as he has the trade of the finest hotels, restaurants, and many private families of the city, and it is for that reason that he prefers to make his own flour, having convinced himself that he can do so to a better satisfaction than if he were to buy it. The only flour he buys is that which enters into such baked products as do not require so high grades of flour. As can be imagined his bakery is one of the largest in Chicago, and in the neighborhood of twenty wagons are busy every day, carrying the cake and bread to the different customers.

Nor can it be a matter of surprise to anyone to hear that Mr. Voltz' baked products have the reputation of remarkable excellence. Ordinary flour, owing to the low prices prevailing in a city like Chicago, can be bought at figures which would not warrant Mr. Voltz in going to the trouble of making it himself, but his endeavors to make a grade of flour to suit his requirements for the best class of customers have been so successful, that he is thoroughly satisfied with the venture which he has carried out in the manner described, for a number of years.

From time to time, as the arts of milling progressed, Mr. Voltz found it necessary, just like other millers, to re-arrange his mill to more advanced ideas. It would lead us too

far to follow him through the various changes in his mill, but it must interest our readers to know by what present arrangement he manages to make flour which satisfies him—as a baker—better than he could buy. The arrangement of his mill consists substantially of the Garden City system, using Garden City Cleaning Machines, the number of reductions (formerly five, later four), being now only three, viz.: Garden City First Break (and Brush Scalper), Garden City Second Break! Rolls, and Noye's Bran Rolls and two Double Stands of Smooth Rolls for Mid-



F. Voltz Combined Flour Mill and Bakery, Chicago, Ill.

dlings. The decreasing number of reductions, together with the progressive efforts of the miller and the resulting improvements have a significant bearing, in my opinion, on the matter of short or long system. We may add that Mr. Voltz is also a dealer in flour, although but little of his own flour finds its way on to the market.

The United States consul at Marseilles, France, states that the French wheat crop this year is estimated at 250,000,000 bushels, and that the requirements of France from other countries the coming year will amount to over 70,000,000 bushels.

OUR LONDON LETTER.

[From our own Correspondent.]

The English farmer is at the present moment seriously considering the effect of the extraordinary weather which has prevailed here during the past month, on the various crops; and a large number of millers are now preparing for a similar state of affairs to that in the year 1879, when kilns had to be erected in nearly every mill in Ireland, and a large number in England, to enable the wheat to be ground at all.

July 1888, will long be remembered for the great amount of rain that has fallen, being, with one exception, the wettest July for the past seventy-five years, about six inches of rain having fallen during the month in London.

The full damage to the wheat crop will only be gauged when the harvest has been gathered in, but according to the present prospect it may be estimated at fully 30 per cent. At any rate a yield of 20 per cent. below the average may be reckoned on, as should the weather change in a day or two, not more than 10 per cent. of the injured crop will recover. The damage would have been considerably greater but that the crop has been for some time past, on account of the lack of sunshine, two and three weeks behind the ordinary season.

Snow fell on the 11th ult., and hailstorms have not been uncommon during the month. At the time of writing the rain is beating down in torrents with an accompaniment

of thunder and lightning. Several districts in different parts of the country are at the present time completely flooded, and in some instances railway communication has been interrupted.

The official average price of British wheat will show to a small extent how the continued wet weather has influenced the minds of the farmers and others aware of the mischief being done to the growing crops, although the price is not the actual worth of an imperial quarter, as the returns are not based on a proper scale.

On July 7th, the price of wheat per imperial quarter was returned as 31s 5d. During the following week it hardened to the ex-

tent of a penny rise, and on the 21st it had risen to 32s. On the 28th of July, the average price was given by the Board of Trade as 32s 6d, or an advance in four weeks of 1s 1d. Since last week a still further advance has taken place, and in some localities it is impossible to get English wheat under 38s or 40s per quarter. At Mark Lane, for example, on July 30, English held very firm, and fine white varieties brought 40s per quarter, being a rise of 2s on the week. This level of price will continue for some time to come as a further rise will be checked by the farmers selling their potatoes, which must be got rid of as soon as possible on account of disease brought on by the continued rains.

The English millers can only compete successfully with American flour by having a good supply of cheap Russian wheat for giving strength to their flour. English wheat for flavor will have rather a rough time of it presently, but will be able to hold its own if a good supply of Australian can be bought at a cheap rate. Some large London millers have already been obliged to abandon English for Australian wheat, which is the nearest approach to "the flavored wheat" of any grown out of England.

At to-day's Mark Lane market the supply of home-grown wheat was still smaller than on Monday, and the arrivals from abroad were moderate. The imports of wheat into the United Kingdom during the last 48 weeks were 10,696,924 quarters, against 11,531,170 quarters of 480 pounds during the corresponding period of last year, and of flour 6,636,414 sacks, against 6,306,294 sacks of 280 pounds each. Not much business was, however, done on the market, but the tone was firm, and English wheat was demanding more money.

The rates of customs duty now levied in the colony of Western Australia under the Tariff Act of 1888, is 6d on a bushel of 60 pounds of wheat, and 20s on a ton of 2,000 pounds of flour and wheat offals.

During the past month the Royal Agricultural Society held their annual show at Nottingham, when a good display of milling machinery was exhibited. Messrs. Whitmore & Binyon, of London, obtained one out of the three silver medals awarded for a "Weiss" sieve purifier, which does away with the necessity for a fan and stive room. An undulating sheet lifts the fluff from the middlings and carries it over the tail end of the machine, while the purified middlings fall through the meshes of the silk.

The Simon Haggemacher dresser is now being fitted into several mills in the country, but I have not yet satisfied myself as to its advantages on English wheat milling. Mr. C. A. Pillsbury has, I understand, ordered one to experiment with in his mills at Minneapolis.

Mr. L. C. Porter, of Winona, is busy showing and explaining his testing appliances for flour. One day last week was spent by that gentleman in carrying out some experiments on different flours at the City Guilds of London Institute, South Kensington.

Mr. H. W. Nevill, the prince of London bakers, advanced the price of his bread to-day from 5½ to 6 per 4 pound loaf.

According to the labor correspondent of the Board of Trade, the state of the skilled labor market during the month of June last was a slight change for the worse, owing to

labor disputes chiefly in the shipbuilding, engineering and cotton industries. The adverse circumstances, however, were so slight as to justify the statement that steadiness is the chief characteristic of the labor market at the present time.

The proportion of unemployed to employed as shown by the return of fourteen societies which furnished full details, is 4.6 per cent. as against 4.4 per cent. for last month, and 8 per cent. for July last year. The reports show 7 trades steady, 4 good, 1 dull, and 5 moderate.

FRANCE.

In an article on "The Agricultural Situation," the *Journal d'Agriculture Pratique* says that the month of June was bad for the crops, and that July has not been better. Rain has fallen nearly every day, and the temperature has occasionally fallen so low as to bring snow. The hay crop is badly injured, while the cereals, and especially the wheats, leave so much to be desired that "a small average" is scarcely possible. Without a speedy change of weather in France, the conclusion of the situation will become disastrous.

From reports I have received within the last few days a sharp and general rise in prices is anticipated unless a change for the better takes place in the weather this week.

An estimate of the French wheat harvest has just been published, and the total yield is put at 30,870,000 quarters, against 32,600,000 quarters as an average. The figures, however, must be taken with some reserve, as the means given is below the figures usually accepted.

A comprehensive report is given by Consul White on the resources of Morocco as a wheat producing state. Mr. White speaks of the country as "a land with a future, a land now lying fallow, but which, in past centuries, exported large quantities of grain to Rome, and which will, at no very distant date, we must hope, supply an abundance of corn to the over-populated countries of Europe." Comfort will be obtained if Mr. White will bear in mind that there is no hurry, as the over-populated countries of Europe have been supplied for years with a super-abundance of corn, and it will be well to hold Morocco in reserve as one of the many "future granaries of the world," till the population of the United States has become large enough to consume all the wheat grown in that country.

L. MAYGROVE.

LONDON, Aug. 10th, 1888.

(From our own Correspondent.)

OUR ST. LOUIS LETTER.

Editor *United States Miller*, Milwaukee, Wis:

DEAR SIR—The date of my last was June 19th, and I notice among the items then reported, was the arrival and sale of the first car load of wheat of the crop of 1888. Since that date our receipts have steadily increased, so, that, although our accumulation has not nearly equaled that of 1887, our elevators and mills have found the supply ample for the demands of the trade, and the former report a generally active trade, with an outlook that leads them to expect the absorption of all of their room, as the season advances. In common with other sections of our country, our wheat has suffered seriously from the general and continued rainy weather, so that the proportion of "No. 2" standard is very

small. Of "No. 3" there is a much greater proportion, but of our entire receipts there is, unfortunately, too great a per cent. of "No. 4," "rejected" and "no grade" to expect any low range of values on the speculative grades.

The influences, both at home and abroad, have tended toward the strengthening of values, until it has become dangerous in the extreme to be a "bear" on wheat. At date of my last cash wheat was selling at 84½¢ per bushel, the same grade bringing readily to-day 90½¢ per bushel. Our market for flour has not shown anything like the animation characterizing wheat, though the trade seems now to be waking up to the probability of a coming demand, that will place it on the active list also, and many are storing their high grades with the expectation of realizing handsomely in the future. From July 1st to August 18th our receipts and shipments of leading articles were as follows:

	Received.	Shipped.
Flour.....	112,315 bbls.	331,799 bbls.
Wheat.....	4,520,653 bush.	843,960 bush.
Corn.....	1,629,683 bush.	1,300,262 bush.
Oats.....	1,780,290 bush.	788,163 bush.

Stocks of above in store at this date: Wheat, 2,715,904 bush.; corn, 585,405 bush.; oats, 464,894 bush.; flour estimated between 80,000 and 100,000 bbls.

Our city mills, with one exception, are running full time, many of them being more or less largely sold ahead. The "Regina," having been interrupted for several weeks through an accident to their machinery, is all right again, and have no trouble placing their product.

The formation of the "Millers' Trust" so called, seems to be progressing favorably, and is expected to take tangible shape at the convention (or meeting) to be held here on 31st inst. Delegates to this meeting have been appointed from Michigan, Wisconsin, Illinois, Indiana, Missouri, Kentucky, Tennessee and Georgia, and the occasion is looked forward to with much interest, and the influence upon the trade of their plans and purposes, will be closely watched.

Millers from adjacent locations are frequently seen upon our floor, and generally report an active trade. Chas. Tidemann, of O'Fallon, Ill., J. F. Dean, of Ava, Ill., and B. R. Neale, of Murphysboro, Ill., were among the visitors this week.

The shrinkage in values of white milling corn has produced a very marked difference in the cost of meal, hominy, grits, bran, etc., and enables our two mills to turn out their work at a fine profit, and both seem to be running their full capacity.

The demand for mill feed has so far been in excess of the expectations of millers and dealers, and prices have remained unusually firm, especially in view of the general good condition of pasturage throughout the country, and I learn through Messrs. Connor Bros., who are extensive dealers in grain and feed, that a steady trade is anticipated throughout the year in those products. The grinding of screenings, or mixing them with their bran, has become so popular with many millers that they have largely disappeared from mill products, though they find ready sale when offered, and mixers and dealers are all the time on the lookout for them at good prices. This information is furnished me by Mr. Chas. Eakin, who is quite extensively engaged in that trade. Messrs. H. & L. Chase continue to report a heavy trade in bags, a fair proportion being for jute exports.

Respectfully, S.

St. Louis, Aug. 24, '88

UNITED STATES MILLER.

E. HARRISON CAWKER, EDITOR.
H. O. PARKS, ASSOCIATE EDITOR.

PUBLISHED MONTHLY.

OFFICE, No. 134 GRAND AVENUE, MILWAUKEE.

SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.

To American subscribers, postage prepaid, \$1.00
To Canadian subscribers, postage prepaid, 1.00
Foreign subscribers, 1.25
All Drafts and Post-Office Money Orders must be made payable to E. Harrison Cawker.
Bills for advertising will be sent monthly, unless otherwise agreed upon.
For estimates for advertising, address the UNITED STATES MILLER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE & CHICAGO, AUG., 1888.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

HEAD millers in mills having a capacity of 150 bbls. or more will find it to their advantage to send us their addresses with name of firm employing them, etc.

The Jeffrey Manufacturing Co., Columbus, Ohio, make some interesting announcements in our advertising columns.

The third article on the subject of "Power Transmission Machinery," by A. J. Shaw, M. E., appears in this number.

We shall be pleased to receive from any of our readers, short, crisp, sensible letters on subjects of interest to the flour and grain trade for publication.

SOME of our contemporaries do not like the course of the UNITED STATES MILLER in not only circulating 10,000 copies per month, but proving it *occurally* to those interested. Do not find fault with us, but go and do likewise.

The Richmond City Mill Works, at Richmond, Ind., are, we are pleased to learn, doing an unusually large amount of work this year in the way of remodelling and building new flour mills. This Company has always enjoyed the reputation of doing good work.

The regular annual meeting of the Pennsylvania Millers' State Association will be held at Lewisburg, on Tuesday October 9th, and from the present outlook there will be a large attendance. Let millers bear this in mind, and for any further information, write to the secretary, Landis Leven, Lancaster, Pa.

The attention of the British public has been called to the importation of obnoxious insect pests by ships from foreign ports. It is suggested that a bug inspection committee be appointed.

We send over FIVE HUNDRED sample copies of this number to flour mill owners and importers of machinery in British India, Australia and New Zealand. We will fill all orders for subscription for the UNITED STATES MILLER from these countries for \$1.25 (5 shillings English) per year, or the

UNITED STATES MILLER and 50 novels post paid for \$2.00 (8 shillings, English). A list of titles of books sent as premiums will be found on another page.

THE N. Y. *Commercial Bulletin* and the *Baltimore Journal of Commerce* have got into a dispute over the flour production of Baltimore. Unfortunately, it seems to say the least, that Baltimore has a greater milling capacity than there is any present demand for, as several mills are reported idle. Idle mills are, however, by no means confined to Baltimore. They are to be found in all sections of the country.

In another column we give the explanation by Alex. H. Smith, Esq., of St. Louis, of the "Flour Trust" which has been jumped on by a lot of daily newspapers as inimicable to the public welfare. A careful reading of the explanation referred to will, we think, relieve the terrors of the press guardians of the people.

THE quantity of wheat exported during July, including flour as wheat, was but 6,988,697 bushels, against 16,887,993 for the same month last year; and it is worthy of note that the flour exported, 803,925 barrels, was equivalent to 3,617,652 bushels wheat, while the quantity of wheat sent abroad was but 3,371,035 bushels. Last year the exports included a smaller quantity of flour, the equivalent of only 2,844,531 bushels wheat, but no less than 13,548,461 bushels of wheat were shipped to foreign ports.

ALL persons desiring to reach the entire milling and grain trade of America, by circular or otherwise, should obtain a copy of CAWKER'S AMERICAN FLOUR MILL AND ELEVATOR DIRECTORY FOR 1888.

THE exports of flour from the United States during the twelve months ended June 30 were the largest on record, viz.: 11,747,028 barrels, exceeding the total of the previous year, which was 11,329,049 barrels. In 1885-86, 8,070,504 barrels were exported, and in 1884-85, 10,373,724 barrels. About 2,500,000 barrels are shipped to the West Indies, China, the Brazils, etc., the balance finding its way to Europe.

AUSTRALIAN and New Zealand mills are being rapidly remodeled to the roller process. It is said that fully one-third of the mills in operation in those distant lands are roller mills of modern construction. Australian and New Zealand millers will find it advantageous to correspond with firms advertising in this journal.

THE MILLERS' NATIONAL ASSOCIATION is rapidly increasing in membership, and includes the owners of a great many of the largest as well as of medium and small mills in almost every section of the country. The comments of some disappointed milling papers on the Association, and their cowardly innuendoes against some officers of the Association must make amusing reading for the members who can see so plainly "where the shoe pinches."

If any milling paper *knows* anything objectionable to the interests of the Association in the conduct of its affairs by any of its officers, why not speak out plainly and call persons and things by name. To make mysterious remarks

and Iago-like hints of this and that concerning an Association or its officers or of another publication, in newspaper columns, that no one can fully understand, is contemptible and foreign to the practice of honorable journals; and moreover, when looked at from an humorous point of view, it is as some one has said like "winking at a pretty girl in the dark." It don't give the winker much satisfaction and don't disturb the winkee at all.

THE OHIO STATE MILLERS' ASSOCIATION held its annual meeting at Columbus, O., June 27, a large number of representative millers being present. On final organization the following officers were elected: President, F. Schumacher, Akron; Vice President, M. B. Clark, Cleveland; Secretary and Treasurer, M. H. Davis, Shelby. The State was divided into nine districts for district organizations. Resolutions were adopted condemning the railroads for discriminations in freight rates against Ohio millers. The Secretary was authorized to furnish copy of proceedings to all milling journals. A number of well-known machinery men and flour brokers were in attendance.

THE mill-building and mill-furnishing business is by no means as depressed as was predicted earlier in the season. New mills are being built in almost every section of the country, and old machinery is being replaced by new, etc., etc. There is not a flour mill in operation in the whole country but what is almost daily calling on manufacturers and dealers in the class of goods they use for something and the aggregate is simply enormous. It is true that some of the large establishments have the lion's share of these orders, for they have expended a great deal of labor and money in making themselves well known to the millers, both through their advertisements of various kinds and their travelling men, but the smaller dealer is also reaping his share of orders, and nearly all, as we have heard, are fairly well satisfied with the year's work so far, while some have undoubtedly sold more machinery than in any previous year.

EXPORTING millers should write to the Riverside Printing Co., Milwaukee, Wis., for the best Flour Cable Code ever published. There are more copies of this Code in use than of ALL other flour codes published. It is simple and accurate.

As was expected, the editorial note in a recent issue of the UNITED STATES MILLER, regarding the jealousy exhibited by two or three milling journals towards the "official organ" of the Millers' National Association, has caused an exhibition of spleen on the part of the publishers, who found that the garment fitted them, and thereupon donned it and went on dress parade, which is amusing to us. Our remarks have been distorted and volleys of mud are flying in our direction.

This is, of course, rather unpleasant from a personal point of view, but is one of the things an editor in our field must accustom himself to. It is an unfortunate habit that some journalists have of airing their likes or dislikes before their patrons, who have not the remotest interest in their quarrels. We are not adept in "slinging mud," or writing scurrilous personalities, and do not be-

lieve that our readers find anything interesting or instructive in such articles. We shall make no attempt to war with our E. C.'s with their own vile weapons. Let it pass.

WE recently received a letter from the Nordyke & Marmon Co., Indianapolis, Ind., in answer to an inquiry we made from which we take pleasure in quoting the following:

"We are running 15 hours per day with a force of 400 men and have enough orders on our books to keep us employed for 4 months longer without taking an additional order in the mean time. The prices for machinery are, as is well known to every one, down to hardpan, but on account of excellent crops in some sections of the country, there has been more building done this year than for two years past. We see no reason why the mill building business should not be good for the future, as the country is settling up fast and improvements are being made in machinery from time to time which necessitates their adoption in mills of those who wish to keep up with the times."

THE Wisconsin Press Association recently took an excursion lasting three full days through Wisconsin and Northern Michigan. A special train was provided, consisting of five Wagner coaches. The route taken was from Milwaukee over the Milwaukee, Lake Shore & Western R. R. to Rhinelander, thence over the "Soo" road to Sault Ste. Marie, thence over the Duluth, South Shore & Atlantic R. R. to Marquette and Champion, Mich., the home run from Champion to Milwaukee being made over the Milwaukee & Northern R. R. We could fill pages of this journal, if space permitted, in describing the many interesting and pleasant things we saw. The banquets at Antigo and Rhinelander, the steamboat rides and carriage drives and picnics at the "Soo" and Marquette, and the final elegant supper at Ellis Junction furnished with the compliments of the Milwaukee & Northern Railroad to one hundred and fifty ravenously hungry editors and companions. Verily, we do not believe that Gen'l Pass. Agt. Sheardown ever had so many nice things said about him in the same length of time as during and after that long to be remembered supper at Ellis Junction. Suffice it to say that the excursion was a grand success. We have gathered a good deal of information about the "Soo," and its wonderful locks and water-power, which we will appropriately condense and give to our readers in the near future. A pleasant reminiscence of our visit to the "Soo," was a buggy ride all over the city and out into the country behind Maj. Bedford's race horse, one of the best in Northern Michigan.

RANDOM REFLECTIONS ABOUT MILLERS, TRUSTS AND TARIFF.

Should millers consider it to their interests to organize a regular trust it seem, on no less an authority than James G. Blaine, that there is nothing particular to prevent them from doing so, for in his speech at Portland, Me., recently, in speaking of trusts, he is reported to have said that they "are largely private affairs, with which President Cleveland nor any private citizen has any right to interfere."

A good many people, however, think that trusts should be either entirely prohibited or severely regulated. Like the tariff question it is impossible to settle it so as to please producer, laborer and capitalist. The object of a protective tariff is to prevent foreigners

from competing with American manufacturers and producers. The object of a "Trust" is to prevent ruinous competition between American manufacturers and producers by a combination of all or of many of a certain class who entrust the fixing of prices, regulation of production, etc., to a governing committee or board of directors. The American consumer has to pay direct for this kind of protection to American manufacturers or producers. There are undeniably good arguments in favor of "trusts," but if possible to reach them by law they should be legally regulated, so that the American public would be properly protected from extortionate demands. Likewise the present tariff-law should be so revised as to be of the greatest practical benefit to the whole country, and no one who has studied the subject at all will deny that many such changes could and should be made. Millers certainly would be opposed to putting a protective tariff on bolting cloth, which is a necessity in flouring mills, although it is a fact well-known that thousands of yards are annually used for ladies dresses and other articles of luxurious apparel; and they are also anxious to have jute and jute bagging, and also Canadian, especially Manitoba wheat, come in free of duty. If it does not, a good deal will go across the ocean in the shape of wheat instead of flour. No matter what the political complexion of the present or the next Congress may be, it is our opinion that a revision of the tariff will be made, which will place many additional articles on the free list, reduce the tariff on others, and perhaps, increase it on some. The sooner either or both these questions are settled, the better it will be for business generally.

DO YOU PAY YOUR ADVERTISING BILLS WITH MACHINERY?

A FEW PERTINENT REMARKS ON THIS TIMELY TOPIC.

It is a custom with some manufacturers, in making contracts for advertising, to endeavor to arrange the terms so that they may pay for the service rendered with their goods. This practice must certainly be due to lack of experience and forethought. The idea that a "bargain" or a discount on advertising rates is obtained by balancing the list price of goods against the card rates of the average publication, is fallacious. A greater mistake was never made. Publishers of the average trade journals, are not generally very weak minded, or easily taken in, and in accepting an advertising contract, which is to be paid for in machinery or merchandise, they are not liable to figure on losing money by the operation. The best trade papers will not accept such contracts. Publishers who are willing to adopt this method, in order to obtain patronage usually do so because their papers have so little intrinsic merit, that they must resort to "special inducements" in order to secure any advertisements, and advertisers will find it just as easy to obtain from such publishers a cash discount from their "card rates," which will be equivalent to the difference between the net cost of their goods and their list price, and which will be a hundred per cent. more profitable for their business in the end.

It costs just so much money to issue a paper, and a publisher is not wise, nor can he prosper, if the space in his advertising columns is

sold below cost. When the advertiser pays for his ad. just what his goods cost him, and the publisher who receives them, gets for his service what he can get out of the goods—an unknown quantity to him, he must take the chances of selling them for enough to reimburse him for his contract, and figures accordingly for safety. By the operation he is forced to go into another line of business from that of his proper field, and becomes an active competitor of his advertising patron in his market. He is the worst sort of a competitor, too—one who has no interest in the manufacture of the goods, and is thoroughly unscrupulous in regard to maintaining prices—with but one desire to get the goods off his hands and realize the cash. He cares nothing about the cost of manufacture or what the goods are worth, but sells them on the basis of the value of the advertising space contracted for. This leads to a demoralization of market prices. He finds that A wants a machine, such as he has on his hands. Its lowest net price (bought from the manufacturer) is \$100—the list price being \$150. A, knows that he has no business selling the machine and will not pay him any thing like market price for it, but offers to give \$75 dollars cash. The net cost of the space occupied by the advertisement is estimated at about \$60, though the "card rates" in the paper showed it to be worth \$150, and the list price of the machine was accepted to balance the "card rate." As Mr. Publisher wants the money, and sees a net profit of \$15 in the transaction, he accepts the \$75 and is happy. The manufacturer estimates that it cost him about \$75 to build the machine and he received \$150 worth of advertising for it—he is also happy. Buyer saves \$25 by his purchase and is just as well pleased.—Everybody satisfied that they have a "bargain."

B, comes along, sees A's machine, admires it and wants one like it. Don't ask how he got it, but enquires what it cost. A, replies confidentially, that he got a bargain and paid but \$75 for it. B visits manufacturer, asks price. —"\$110."—B won't pay it; "knows that the machines are being sold as low as \$75. Manufacturer comes down to \$100, and swears that a lower price has never been made to anyone. B leaves in disgust; will not patronize liars and robbers. Manufacturer cannot understand what is the matter, but upon investigation happens to find out that publisher has cut his lowest market price beyond all reason. Publisher explains: "Had to have the money and made great sacrifice." Manufacturer mad; never will patronize the paper again. Every one mad except the man who got the machine. Thus it goes almost without exception. Manufacturers do not always discover that they have suffered injury by this practice, and continue it to their great detriment.

No experienced or "long-headed" advertiser will listen to or offer a proposition to give his goods into the hands of a "scalper" in pay for advertising, knowing that by so doing he only makes for himself a competitor who injures his goods in his own market by inexperience and indifference as to their worth, and by cutting established prices. Let each man stick to his own business; the manufacturer to making and selling his wares and the publisher to printing a paper that is interesting to its readers and will thereby prove profitable to its advertising patrons by attracting attention to their goods. Advertising space is worth money if it is worth anything, and money should be paid for it.

THE GARDEN CITY SYSTEM.

DOUBLE SCALPER
FOR 2ND BREAK

SCALPER
FOR MID BULKS

SCALPER
FOR 2ND MID BULKS

DOUBLE SCALPER
FOR BRAN

BRUSH SCALPER

SEAM IMPURITIES TO OFFAL

PURIFIER

GARDEN CITY FLOUR BOLT
MADE BY THE GARDEN CITY MILL FURNISHING CO.

PURIFIER

CENTRIFUGAL

BRAN

OFFAL

GARDEN CITY FIRST BREAK

2ND & 3RD BREAK

SMOOTH ROLLS

PAT. BRAND

WHEAT

BRUSH FINISHER

SMUTTER & SCOURER

SEPARATOR

Drant & Hartin Eng'rs, Chicago.

Drum & Martin Eng'rs, Chicago

EVERY MACHINE FURNISHED IS BUILT IN OUR OWN WORKS.

GARDEN CITY MILL FURNISHING CO., CHICAGO, ILLS.

CORRESPONDENCE

Editor United States Miller:

Your June paper came to hand and I read with interest your correspondence from the different cities, but your Buffalo letter broke me all up. That man James L. Barnum is evidently a freak of nature and should travel with the show of his illustrious namesake. I have in my pocket a great big silver dollar which is of the opinion that Mr. Barnum is not a practical miller employed in Buffalo. He may be a miller out of a job, or a newspaper reporter, roustabout, or something of that sort; and if Mr. Barnum will cover my dollar with a like amount, he can make a bet with me. We have millers in our large mills who have more sense than is manifested in the letter of your valuable Buffalo correspondent. I have been using the very same process of splitting and brushing the kernels long enough to know its value and can afford to read all the arguments against it, but in all the reading I have done on this matter, I have never come across anything so devoid of practical knowledge as Mr. Barnum's statement, to the effect that the writer defies the best known expert to see any change in the color of the flour, when only $\frac{1}{4}$ of 1 per cent. of impurities were mixed with it.

Do tell; a little matter of a quarter per cent. of dirt indeed. Mr. Barnum evidently would not look for anything less than a ton of dirt to a barrel of flour. Millers, of course, will take no stock in such nonsense, and I do not write this letter to save them from a mistake. It would be an insult to them to even suppose they needed it. I only write this to ease my mind, also to give to Mr. Barnum the advice to follow the example of correspondents from other cities, who only write on subjects they know something about.

I forgot where I heard or read it; but there is before my mind a story told by some miller of a dog who was looking at a milkmaid at work. Then when she got through and was not looking, the dog did something that he ought not to do, but the milkmaid, when she discovered it, did not mind it a bit, because she was going to strain the milk anyway. I almost forgot that story, but the small per cent. of dirt Mr. Barnum considered as so insignificant, happily kept me from forgetting it altogether. If Mr. Barnum is a single man he should try to become better acquainted with the milkmaid. Their views are likely to agree on a good many points.

U. A. ERAMON.

Minneapolis, Minn.

Editor United States Miller:

Once more I trespass on you, and ask a little space. Arguments are flying around thick in regard to different systems. Now a system is but an idea of the miller operating the mill. One gets results—(when I say results, I mean satisfactory out-put,) with two breaks, another with three, and so on. It has yet to be demonstrated what is the exact manipulation of the different kinds of wheat. Every furnisher of mill machinery has a pet hobby, and their own peculiar plan to sell their goods. They are certainly not to be blamed, for business is business. We can take the pro-

duct from all classes of standard mills, and yet we can see but little difference. The old song: "Little drops of water, little grains of sand," &c., is what tells in making flour. A small leakage, a bran not properly cleaned, will soon cause the miller to say: Oh, there is no money in milling now-days. There is money in it if the leaks are stopped. How to stop them? one would ask. I am a short system miller and so have rather openly stated, but I do say, that I never would have obtained the results in my mill that I have were I not. I use not over $\frac{4}{5}$ of No. 2 wheat to the barrel of flour, (accurate weight, as wheat is delivered to mill, and tested, not by one test but dozens of them,) and I obtain 70 per cent. patent, 27 per cent. of bakers', and 3 per cent. low grade, or running on a high straight grade, I make 97 per cent. and 3 per cent. low grade. Further, I could not do this unless I had by close examination, and considerable experimenting, arranged, discovered, invented, or whatever it may be called, a corrugation that would do the work that I considered so necessary to a successful reduction of the grain. Well, that corrugation, mine alone, patented and protected, is what enables me to do a class of work, that with my short system outfit, gives me the opportunity to turn out a grade of flour economically made—that will favorably compare with any of the most elaborately equipped mills in this country.

Mr. Editor, I am a self-made practical miller, and think I know my business pretty well. I have no desire or wish to self-praise, &c., but I have furnished a number of flow sheets to my brother millers, and I do say that every one who has carried out the plan, has been successful. It would be too much of an imposition on you to publish them (you probably would not do it,) or I could furnish you a line of testimonials that would prove my statements. Any of your readers are heartily welcome to them.

Now, Mr. Editor, in order that you may judge intelligently yourself, I took the liberty and mailed you samples of main break chops from a two and three break mill, which will tell you what kind of work is done in such mills right at the start, or head of mill, using my corrugation and system of separation. On examining above samples, you will find that I make a good, clear and clean break, making as much pure flour as possible, even middlings, and then leaving the bran broad and flaky. This obtained, the rest is simple enough. Well, I flatter myself that the corrugation I use will do the business. It will be a pleasure to me to have any of the fraternity come and see me. My mill is always open to inspection, and if I can get a new idea, I will be only too glad.

It strikes me, that the Millers' National Association, should put a stamp of approval or disapproval on every change in milling methods or machines, and so give a chance to those who have something good to offer.

Well, I am inclined to think that I have trespassed on your patience too much, but, Mr. Editor, put it down to ignorance on one hand and a desire to help the trade a mite on the other. I beg to state in conclusion, that I make three breaks on wheat in my mill, and make five reductions on middlings, using a Garden City machine and brush scalper for

my first break, and the same company's machines for the thorough cleaning of my wheat.

Should business ever call you to this vicinity, I would be more than pleased to have you call on me and investigate for yourself. I am certain I can surprise you; anyway you shall have a hearty welcome.

Very truly yours,

H. A. HUEFFNER.

Palmer, Ills., July 16th, 1888.

Chicago, July 16, 1888.

Editor United States Miller:

Dear Sir—I observe in your last issue an item from a correspondent in Buffalo, referring to the running of the first break flour into the higher grade. He says it will not make the slightest difference, if you do run the break flour into the higher grades; in other words, he would have us believe, that it don't make any difference, if you run more or less dirt into the flour. There is not a single mill, to my knowledge, in Minneapolis, Milwaukee, St. Louis, Buffalo or Chicago that runs the first break flour into the higher grade; to the contrary, all mills that claim to be modern mills, run their first break flour into the feed, or into their very lowest grades. It is a fact, that in Europe where some of the best modern mills average from ten to twelve different grades, they invariably run the first break flour into the very lowest grade; this is self-evident that they are convinced that it does lower the grade of their product.

It does not require much of a milling experience to realize that the impurities must be kept out if they desire a good clear product. Of course, there are a great many mills in this country where a strictly first-class product is not a necessity; and in such mills a difference of several shades, cuts no figure, but to the miller whose product comes in competition with the best of our flour—he must use every means to keep up his grade, and keep impurities out of his flour.

To mill builders and mill furnishers our system is as the old adage: "Sour Grapes," for the reason that I control the patents relating to this valuable branch of milling; but to the thinking miller, he knows, that in order to produce clear flour of the highest grade, it is self-evident that he must keep out the impurities. It is a plain question—If you have impurities in the flour, you certainly have not a clear flour. I contend that the present system of bolting and purifying, in vogue in our modern mills, is as near perfection as can be attained; the ground for improvements in this line has been well gone over, and the main fight, and the only ground for improvement, as I have already stated for years, is to remove the impurities before grinding. I know that this idea has been fought bitterly, but I am confident it will be the winner in the end, not through the efforts of mill furnishers but through thinking and progressive millers.

I can refer with pride to many mills who turn out the best product in the country, and on this system.

Yours respectfully,

LOUIS GATHMANN.

AN AUTHENTIC BUYERS' GUIDE.

MILL AND ELEVATOR BUILDERS, MILL FURNISHERS, MANUFACTURERS OF AND DEALERS IN MILL AND ELEVATOR MACHINERY AND SUPPLIES.

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year, cash with order. Additional lines, \$1.00 each, per year.

Edw. P. Allen & Co., Milwaukee, Wis., builders of complete Flour Mills, manufacturers of Flour Mill Machinery, and dealers in Supplies of every description. [Mr. 89]

Garden City Mill Furnishing Co., Chicago, Ill., Mill Builders, manufacturers full line of Flour Mill Machinery, dealers in Mill Supplies, Bolting Cloth, etc., etc. [Mr. 89]

Jonathan Mills Mfg. Co., Cleveland, O., manufacture of Milling Machinery, dealers in Mill Supplies, Bolting Cloth, etc. [Mr. 89]

Borden, Sebeck & Co., 48 & 50 Lake St., Chicago, Ill., manufacturers of "HARRISON CONVEYOR" for Grain, Malt, etc., etc. [Mr. 89]

Hasseltine Mill Furnishing Co., Minneapolis, Minn., manufacturers of "MCANULTY FEEDERS" for Rolls, etc., etc. [Mr. 89]

John C. Higgins & Son, 165 West Kinzie Street, Chicago, Ill., makers of and dressers of Mill Picks. [Mr. 89]

H. F. Yale & Co., Milwaukee, Wis., Manufacturers' Agents of Engines and Boilers, New York Leather Belting Co.'s Leather Belting, Dodge Wood Pulley.

Poole & Hunt, Baltimore, Md., manufacturers of Steam Engines, Water Wheels, Flour, Corn, Paper, Saw and Cotton Mill Machinery.

W. J. Clark & Co., Salem, O., manufacturers of "SALEM" Elevator Buckets, etc.

Thornburgh & Glassner, 18-22 N. Clinton St., Chicago, Ill., manufacturers of Mill and Elevator Supplies.

R. C. McCulley, (P. O. Box 214) Lancaster, Pa., manufactures Cob Crushers, Cooper's Stoves, Castings, Patterns, etc. [Mr. 89]

B. H. & J. Sanford, Phoenix Iron Works, Sheboygan, Falls, Wis., manufacturers of the "IMPROVED WALSH DOUBLE TURBINE WATER WHEEL." [Mr. 89]

John C. Kilner, York Foundry and Engine Works, York, Neb., Mill and Elevator machinery of all kinds, Engines, Boilers, Pulleys, Shafting, etc. [Mr. 89]

The Gutta Percha and Rubber Mfg. Co., 150-161 Lake St., Chicago, Ill., Belting and Rubber Goods. [Mr. 89]

The Avery Elevator Bucket Co., sole owners and manufacturers of Seamless Steel Elevator Buckets, Wagon, Lake and Dart etc., Cleveland, O. [Mr. 89]

Richmond Mfg. Co., Lockport, N. Y., manufacturers of Grain Cleaning Machinery, Bran Dusters, etc. [Mr. 89]

N. Y. Belting and Packing Co., N. Y. Leather Belting Co., Goulds & Austin, Agents, 167 and 169 Lake Street, Chicago. [Apr. 89]

Weller Bros., 94 Wendell St., Chicago, N.Y.'s Mill and Elevator specialties, Cups, Boots, Spouts, Steel Conveyors, Power Grain Shovels; dealers in Cotton and Rubber Belting, etc. [Apr. 89]

The Nordyke & Harmon Co., Indianapolis, Ind., Flour Mill and Mill Machinery builders, and dealers in Mill Supplies of all kinds. [May 89]

The Case Manufacturing Co., Columbus, O., Millbuilders and manufacturers of a full line of Flour Mill Machinery, Mill Supplies, etc. [May 89]

The Shields & Brown Co., 240 and 242 Randolph St., Chicago, and 143 Worth St., New York, N.Y., makers of Sectional Insulated Air Coverings for steam, gas, and water pipe, etc. [May 89]

W. G. Avery Mfg Co., 10 Vincent St., Cleveland, O., Specialties: Avery Lever Belt Punches, Avery Seamless Elevator Buckets, Belting, Elevator Bolts, &c. [May 89]

The H. J. Deal Specialty Co., Bucyrus, Ohio, Headquarters for Flour and Grain Testing Appliances, and Specialties for the Milling, Flour and Grain trades.

SECOND HAND MACHINERY WANTED.

Any parties having second hand engines, boilers, pumps, etc., are requested to send lists and prices for sale to the undersigned. Any parties having mills for sale, rent or exchange, are requested to correspond with me. Any one desirous of purchasing second hand mill machinery or a mill, farming land or other property, will find bargains by correspondence with me. Address

A. J. MAYNOR, Woodland, Ill.

EXPORT AND MERCHANT MILLERS AND MANUFACTURERS OF WHEAT, RYE AND BUCKWHEAT FLOURS, AND CORN MEAL AND CORN PRODUCTS, (WITH NAMES OF SPECIAL "BRANDS" MADE) DESIRING CORRESPONDENCE WITH SOLID HOUSES WITH A VIEW TO TRADE.

Cards will be inserted under this heading in the UNITED STATES MILLER, not exceeding three lines, paper included, for FIVE DOLLARS per year. Additional lines, \$1.00 each per year.

J. B. A. Kern & Son, "Eagle Mills," Milwaukee, Wis., WHEAT FLOUR BRANDS—Patents: "Success," "Kern's," Bakers: "Triumph," "High Ground," "Eagle," RYE FLOUR BRANDS—"A Rye," "I Rye," "Rye." Hard wheat flour and roller process rye flour SPECIALTIES. [Apr. 89]

E. Sanderson & Co., "Phoenix Mills," Milwaukee, Wis., U. S. A. Manufacturers and Exporters of choice spring wheat flours. Daily capacity 1500 barrels. [Apr. 89]

Bernhard Stern, "Jupiter Mills," Milwaukee, Wis., Roller Mill Hard wheat Patents. Principal brand, "Jupiter." [Apr. 89]

Faist, Kraus & Co., "Duluth Roller Mill," Milwaukee, Wis., Manufacturers and Exporters of choice spring wheat flours. Daily capacity 1500 barrels. [May 89]

Russell, Andrews & Birkett, Penn Yan, N. Y., Manufacturers of roller process Rye and Buckwheat flour. Absolute purity guaranteed. Write for prices. [Apr. 89]

Texas Star Flour Mills, Galveston, Texas, Patents: Tidal Wave, Neptune, etc. *Extra Fancy:* Sea Nymph, Undine. *Extra Choice:* Sea Jewel, Melite. Family: Sea Pearl, Hera.

Grand Forks Roller Mills, Grand Forks, Dak., Situated in the heart of the Red River hard wheat section. Correspondence solicited.

C. A. Campbell Mfg. Co., Baltimore, Md., Best Patent: Patapasco Superlative. Patent: Patapasco Family. Tropical Export Grade: Chesapeake. High Grade Extra: Orange Grove.

Taylor Bros. & Co., Merchant Millers, Quincy, Ill., Capacity 1,000 barrels per day. Winter Wheat Flour exclusively.

Prominent Flour, Grain and Provision Brokers, desiring correspondence with Millers of Wheat, Rye and Buckwheat Flours, and Cornmeal and Corn Products, with a view to Trade.

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year. Additional lines, \$1.00 each per year.

S. P. Thompson & Co., 218 Patterson St., Baltimore, Md., Flour and Grain Commission.

Major Bros. & Co., Produce Exchange, New York, Shipping and Commission, Flour, Grain and Provisions.

W. K. Sherwood, Flour and Grain Commission, 18 South Commercial Street, St. Louis, Mo. [Apr. 89]

L. R. Hurd, Shippers of Minnesota and Dakota Spring Wheats, Minneapolis, Minn., Possessing a thorough and practical knowledge of the *Economical and Flour Producing Qualities* of all wheats grown in the northwest. I am enabled to make purchases with special reference to these qualities.

For Sale or Exchange**AT THE PRICE OF OLD MACHINERY.**

A fine 5 story Roller Mill 5-story Elevator, Shipping Houses, Warehouse, Cooper Shops, Barns, Saw and Planing Mills Flour Mill is 200 bbls. All latest improved machinery. 80-h. p. Engine, 60-h. p. Engine, Saw Mill Machinery, etc. New buildings on 5 acres of ground. Will trade or sell. Address, **W. C. BORCHSENIUS, Baldwin, Wis. [Jy. pd.]**

FOR SALE.

The "Pipestone Roller Mills," 50 barrels' capacity, water power, one and one-quarter miles from Pipestone Station, on the C. W. & M. R. R., ten miles from St. Joseph and Benton Harbor, and eight miles from Berrien Springs, the county seat, in the finest winter wheat section in Southwestern Michigan. The mill was rebuilt one year ago to the roller system. Local orders and exchange keep the mill running steadily. For further information, address, **PUTNAM BROS., Pipestone, Berrien County, Mich. [Jy.-Aug.]**



THE THROUGH CAR LINE

—FROM AND TO—

CINCINNATI

WITH THROUGH CAR SERVICE BETWEEN

CINCINNATI and INDIANAPOLIS,
CINCINNATI and TOLEDO and DETROIT,
CINCINNATI and CHICAGO,
CINCINNATI and ST. LOUIS,
CINCINNATI and DAYTON and RICHMOND,
CINCINNATI and FT. WAYNE and GRAND RAPIDS,
CINCINNATI and GREENVILLE and VAN WERT.

With THROUGH RECLINING CHAIR CAR between

CINCINNATI, DECATUR and SPRINGFIELD, ILLS. and KEOKUK, IOWA, (daily)

PARLOR CHAIR CARS ON DAY, and SLEEPERS ON NIGHT TRAINS, "YEAR 'ROUND."

Ask for Tickets via C. H. & D. R. R.

For full information, Tickets, Sleeping Car Space, &c., Inquire of or Address,
W. H. Fisher, Gen'l Agt., Indianapolis, Ind. W. H. Whittlesey, Central Pass'r Agt., Dayton, O.
John B. Stable, District Pass'r Agt., Toledo, O. D. H. Truay, Northern Pass'r Agt., Detroit, Mich.
Wm. A. Wiggins, Southern Passenger Agent, Chattanooga, Tenn.
J. G. Mason, City Passenger Agent, Cincinnati, O.

Or General Passenger Agent's Office, - No. 200 W. Fourth St., Cincinnati, O.

C. C. WAITE,
Vice-President & Gen'l Manager.

CHAS. H. ROCKWELL,
Gen'l Pass'r & Ticket Agent.

[Translated from the Berliner Mueller-Zeitung for the UNITED STATES MILLER, by M. W. Thormaehlen.]

IMPROVED RYE FLOUR AND RYE BREAD.

It is a well-known fact that the viscid tenacious substance which lends adhesiveness to dough, commonly called gluten, in grain is located nearest the hull, and through the ordinary process of reducing the cereal to flour by grinding, a large percentage of this most nourishing, nitrogenous portion is lost. This is plainly shown by the system of separating through sieves, the heavier part (starch flour from the centre of the grain) readily finding its way to the bottom, while the bran which is lighter, and does not pulverize is completely separated and forms no part of the flour from which our bread is made. Certainly through this process the nourishing value of the flour is lessened. Liebig, has protested against this loss, which the grain suffers while being ground, and has recommended the use of flour where bran has been kept out as much as possible.

In some parts of Germany such bread is prepared and is very much liked, especially so in East Prussia and also in West-Prussia. Such bread now contains in consequence of its gluten properties, a higher nourishing value, although the gluten in the shell of the grain gets into the flour richly mixed with wooden fibre, hard, indigestible husks, and this is the reason why this bread is hard to digest and unwholesome for any stomach. A very interesting discovery has been made by Engineer Uhlhorn which may, if approved of, result in important consequences. He has constructed a machine which will remove only the worthless husk of the grain, but will allow the direct underlying nourishing gluten layers to be worked into the flour.

About the compound of such a flour and the prepared bread made from it, Dr. G. Weymann has made an examination which we report:

"The usual grinding process is not capable of removing the husk of the rye-kernel without taking off the gluten layers, which results in a great loss of the most nourishing part of the grain. Engineer Uhlhorn has succeeded in constructing a machine, which will remove the outer membrane of the grain, so that these gluten layers are retained with the grain and consequently with the bread. The rye is, after going through the ordinary machines, sieve-cylinders and aspirator, and cleaned from sand, weed-seed, etc., moistened with a little water and then the kernels put in the rinsing machine and under a strong pressure ground together. Here the machine regulates itself, and allows the passing off of the grain, so that even if the pressure inside of the machine should be too great, an obstruction could not be possible. Through the grinding of the wet kernels with each other under a pressure, the outer husk loosens itself, and the kernels will receive an ivory-like polish. After the husking the rye is again to go through an aspirator which will blow out the woody threads; then exposed to a strong wind, where it will lose some of its moisture, so that it will be after the grinding process, (which takes eight minutes,) dryer than before. The change which is produced by this grinding process in the mixture of grain and the difference of the mixture of husked and of unhusked rye baked bread, shows the following analysis:

CALCULATIONS OF NATURAL SUBSTANCES.

A. Rye.	Water.	Nourishing Substances.	Fat.	Nitrogen Extract.	Raw Fibre.	Ashes.
Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Unhusked Rye..	13.37	12.31	1.85	68.51	2.32	1.64
Husked ".....	13.24	12.37	1.79	69.12	1.95	1.63
Husks (waste)....	11.12	8.94	2.19	50.33	13.95	4.41
B. Bread out of						
Unhusked Rye..	40.55	7.54	0.89	47.84	1.90	1.23
Husked ".....	39.40	8.56	0.76	48.37	1.64	1.30

CALCULATIONS OF SUBSTANCES FREE FROM WATER.

A. Rye.	Nourishing Substances.	Fat.	Nitrogen Extract.	Raw Fibre.	Ashes.
Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
Unhusked Rye..	14.21	2.13	79.09	2.68	1.89
Husked ".....	14.26	2.08	79.67	2.25	1.76
Husks (waste)....	10.05	2.46	66.59	15.68	4.95
B. Bread out of					
Unhusked Rye..	13.68	1.49	80.49	3.10	2.15
Husked ".....	14.42	1.26	79.32	2.66	2.14

The result of these figures show a perceptible decrease in woody threads, in husked rye compared with that of the unhusked, without lessening in any degree, the amount of "Protein" substance. This is shown by the loaves. The loaf baked from the cleaned rye being of lighter color and decidedly finer than that of the uncleaned; the former also being of lighter weight and easier digested than the latter. Consequently by this husking of the grain the gluten layer is not disturbed; so it easily will be seen that, by the new milling process a larger quantity of nutrition for the consumer is gained. Also from a sanitary standpoint it is much preferable, for by discarding the outer covering all dust and for-substances are removed therefrom and do not find their way into the flour and from thence into the bread; hence a finer flavor and larger per cent. of strength and nutrition is obtained.

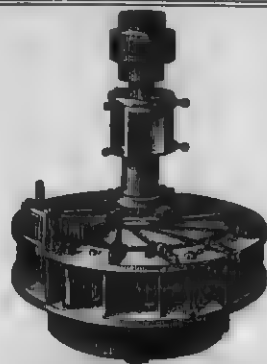
The discarded or removed shells have not, like the usual rye bran, a feeding value. Their worth is mainly as material to be used in the manufacture of paper, as packing material or for stabling purposes, as they are entirely composed of the woody part of the kernel.

NEWS.

Items of all sorts interesting to the Flour and Grain Trade.

The Nordyke & Marmon Co., Indianapolis, Ind., are now using natural gas entirely as fuel for generating steam to drive the machinery in their immense millbuilding establishment. The gas is piped 22 miles from the well supplying it.—The irrepressible H. J. Deal, of the H. J. Deal Specialty Co., is luxuriating at the Centennial Exhibition in Cincinnati. He carries a full line of his flour mill specialties with him, and may be found in Geo. T. Smith's model mill, which is the center of attraction for visitors.—The contract for building the "Imperial Mills" at Duluth, has been awarded. Schemes are said to be ripening for the erection of some more large mills at that place.—Grove & Hess are the proprietors of the recently remodeled and enlarged flour mill at Ottawa, Ill.—A 30-barrel roller mill is being built at Rodgers, Ark.—The Kaukauna Water Power Co., Kaukauna, Wis., will make important improvements this year.—Cornmeal and hominy mills in Ohio, Indiana and Missouri report business good.—J. W. Vest, Freedom, Ind., is building a 50-barrel roller mill.—H. C. Cole & Co., Chester, Ill., will have grain elevator capacity of over 200,000 bushels when their new building is completed.—The American Milling

Co. have completed their new flour and corn-meal mill at Nashville, Tenn.—Morrison & Co., Minneapolis, Minn., are adding a steam engine to their milling plant.—Terry & Co., Roanoke, Va., are increasing capacity to 100 bbls. per day.—The Case Manufacturing Co., Columbus, O., are busy as bees now-a-days endeavoring to meet the demands made upon them for the lines of mill machinery and supplies.—E. James, Ocoquan, Va., is building a 50 bbl. roller mill.—McCoy & Lewis, Millersburg, Ind., are building a 25-bbl. roller mill.—The Oneonta cornmeal mills at Hamilton, O., are doubling their capacity.—A company, with a capacity of \$50,000, has been organized to build a roller mill at Hastings, Neb.—Geo. McDonald is building a 50-bbl. mill at Jefferson, Tex.—Halliday's mill, at Rapidan, Va., is to be 50-bbl. capacity.—The Acme Milling Co. are now grinding at the rate of about 2,000 bbls. per day.—D. L. Rosensteel, Idaho, Pa., is building a 50-bbl. roller mill.—The Case Mfg. Co., Columbus, O., are building a cornmeal mill for Des Plaines Valley Co., at Lockport, Ill.—Voges & Krepke's mill at Evansville, Ind., burned Aug. 6; loss, \$35,000.—The Victor mill, at La Crosse, Wis., has increased capacity to 1,100 bbls. per 24 hours, and is adding a larger engine.—The Rochester, N. Y., flour mills are idle most of the time lately for lack of water.—Stahler & Wescott are putting up a 65-bbl. mill at Delano, Minn. They received a bonus of \$800 and a mill-site. Steam power is to be used. It is said that this is one of the Noye model small roller mills built in imitation of the plan devised by Geo. T. Smith. If it works as nicely as the Smith "Eldred, Jr." it will be a "daisy." Mr. Stahler is a Minneapolis miller, and Mr. Wescott is a western agent of the Noye Co.—Gill & Forrester's (Moorhead, Minn.) mill now has a capacity of 300 bbls. per day.—Edw. P. Allis & Co. are building a 1,000-bbl. roller mill in New York City for Messrs. Sumner & Stewart.—A grist mill is being built by N. Young at Waters, Ark.—A neat 25-bbl. mill is being built by W. L. McCoy, Treadway, Ky.—Burned: E. E. Hill's mill at Moosup, Ky.—The Connersville, Ind., mill is having its affairs adjusted by a receiver.—Burned: The Henderson, Ky., mill.—A 150-bbl. roller mill is being erected for the Perry Mill Co., at Roanoke, Va.—Assigned: T. M. Marfield, Chillicothe, O.—Washburn, Crosby & Co., Minneapolis, Minn., is now changed to Washburn, Martin & Co.—John Richmond is about to build a 100-bbl. mill at La Crosse, Wis.—A 150-bbl. roller mill is being built at Elysian, Minn.—The Willford & Northway Mfg. Co., Minneapolis, are busy with a good many small jobs, aggregating a large amount of business. Among them is a 65-bbl. mill at Thief River Falls, Minn.; the remodeling of a 75-bbl. mill at Keokuk, Ia.; a 100-bbl. mill at Briggsville, Wis., etc. The largest job in hand at present is the 300-bbl. roller mill for the Little Falls Roller Mill Co., at Little Falls, Minn.—A 500-bbl. mill is soon to be erected at Tacoma, W. T.—A 75-bbl. roller mill has recently been built by Holland Bros. at Murray, Ky.—Burned: Aug. 10, John Feakin's mill, at Rockton, Wis.—Burned: Aug. 10, Edw. Parkis' mill, near Galway, N. Y.—Burned: Elevator A, at Peoria, Ill., loss, \$300,000; insurance, \$125,000.—A lively business is reported from the machine shops and foundries, and dealers in machinery and plantation supplies through the Southern states.—Kelly & Co. are about to build a corn and flour mill at Jug Tavern, Ga.—J. E. Booth, Pulaaki, Ga., is ready to receive bids for a new flour mill.—J. L. Konier's mill at Cremona Station, Va., is to be changed to the roller system, with 75-bbl. capacity.—W. J. Munger, Daleville, Va., is refitting with rollers; capacity, 40 bbls.—Burned: A. S. Konech's mill, at Easton, Pa.—The Jackson Flour Mill, at Fairmount, W. Va., was recently wrecked by a flood.—Klepser & Co., Clover Creek, Pa., are remodeling to a 50-bbl. roller mill.—Burned: Jas. Gorshner's mill, Rochester, N. Y.; loss, \$25,000; insurance, \$11,000.—Stiles & Van Gorder are building a roller mill at Kansas, O.—Loundes & Charpenung, Clarksburg, W. Va., will build a 50-bbl. roller mill.—Newell Bros., Cleveland, O., are rebuilding their mill recently burned.—Messrs. B. H. & J. Sanford, of Sheboygan Falls, Wis., manufacturers of water wheels, have recently filled orders as follows: A 32-inch Improved Walsh Double Turbine for Charles Backhaus, Elselville, Wis.; a 22-inch wheel for C. B. Powell, Medford, Wis.; a 48-inch wheel for S. N. Nesbit & Bro., Spartanburg, S. C.; two 20-inch wheels for A. W. Polke & Co., Young's Store, S. C. Send for their catalogue just out. Hundreds of their wheels are in use, and are pronounced excellent.



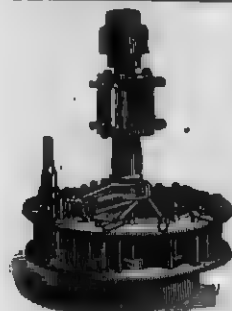
JAMES LEFFEL'S IMPROVED Water Wheel

Fine New Pamphlet for 1888.

The "OLD RELIABLE" with Improvements, making it the Most Perfect Turbine now in use, comprising the Largest and the Smallest Wheels, under both the Highest and Lowest Heads in this country. Our new Pocket Wheel Book sent free. Address,

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and 110 Liberty St., New York City.

[Please mention this paper when you write to us.]



POOLE & HUNT'S Leffel Turbine Water Wheel

Made of best material and in best style of workmanship.

Machine Molded Mill Gearing

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Mixers and General Outfit for Fertilizer Works.

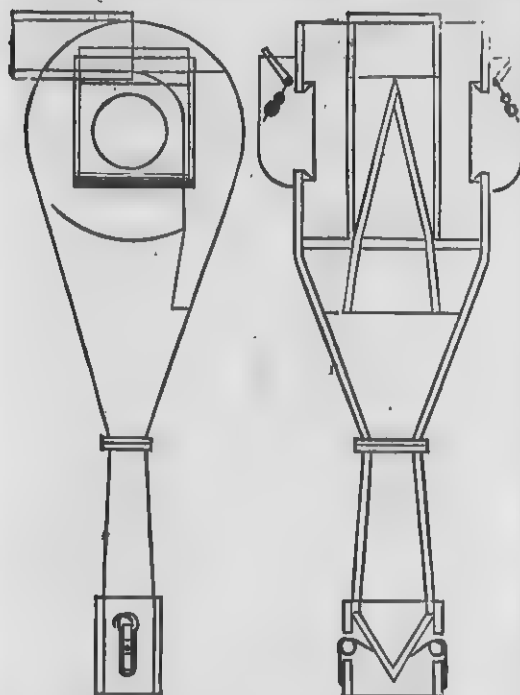
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N. B.—Special attention given to Heavy Gearing for Pulp and Paper Mills.

[Mention this paper when you write to us.]

The Eureka Dust Catcher



In offering this machine, I would call your attention to the arrangement for regulating the Catcher to suit the amount of air from fan (as shown by cuts), there being hardly two purifiers in a mill that discharge the same quantity of air, owing to the kind of middlings handled, some requiring light, while others require heavy suction, thus the same discharge opening will not answer for all machines. For this reason automatic machines fall in so many cases. In this machine the valve is set to balance the Fan, which point can be told instantly by a humming noise when the Fan is choked, and when once set is right at all times. Should the speed vary the valve opens and closes as the air varies. These machines are without any machinery whatever, requiring no extra power, no cloths to clog, or anything to get out of repair. As they start, so they will operate for years. Nor is this a so-called improvement on some other machine, but an entirely new machine, gotten out under our own patents and sold entirely on its merits. Warranted in every particular. These machines are intended for all kinds of work in a mill. It will be observed in the discharge of the dust that the spout is provided with a spring valve which can be set so as to allow the spout to fall to a certain point, when the material will counterbalance the valve and discharge the dust which can be spouted away to any suitable point, or the spout can be detached and an intermediate spout put to the machine and the valve spout attached at some more convenient place in the mill. The machine can be set at any convenient point. All that is required is that the spout shall enter on a level, or nearly so, with an abrupt angles in the spout, always being careful to close the discharge valve just to that point where the Fan does not labor, as the opening is made large so as to meet all cases, and if not closed the machine will blow out. These machines are built in three sizes for Purifiers and two sizes for Smutters.

Address for prices and discounts the Inventor and Sole Manufacturer,

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DETACHABLE in every Link.

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**Elevators,
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STONE, CLAY, PAPER-PULP,
TAN-BARK, BOXES, BAR-
RELS, ETC.

Also manufacturers of the Gregory Grain, Seed and Fruit Dryer; Meal and Flour Purifier.

Before Placing Orders

Send for Illustrated Catalogue and Prices.

THE JEFFREY MFG. CO.,

169 E. 1st Ave., COLUMBUS, O.

[Jan. 89.]

WILLSON

Spring Whiffletree



Designed to Make the Burdens of Laboring Horses Easier, and to Keep them in Good Working Condition.

These trees will commend themselves to every owner of Laboring Horses, for the reason, that the load is constantly balanced on the spring, making it impossible for the horse, harness or wagon to receive any sudden shock or jar. Some of the benefits derived from their use are as follows:

Prolongs the Life of the Horse; Prevents Sore Shoulders, Stiffness of Limbs, Reluctance in Pulling and Destruction of Harness.

Send for Catalogue and Prices.

AGENTS WANTED.

THE JEFFREY MFG. CO.

169 E. 1st Ave., COLUMBUS, O., U. S. A.

[Jan. 89.]

STILL ON TOP.



Perhaps the highest compliment that could be paid the "SALEM" Bucket, is the fact that, during the past few years, its shape has been so closely imitated by other manufacturers, as to infringe our patented rights; but experience reveals the imperfections of imitations, and, we therefore, take it as a further compliment to the "SALEM" Bucket, that some of its old patrons who were induced to try the imitations, have now returned to the Salem Bucket, thereby acknowledging it to be the most satisfactory. Don't be deceived by other makes of Buckets that are claimed to be "just as good." Insist upon having the ORIGINAL AND RELIABLE

"SALEM" BUCKET.

All legitimate "Salem" Buckets are plainly marked with the word "SALEM."

W. J. CLARK & CO., Sole Manufacturers, SALEM, OHIO.

THORNBURGH & GLESSNER, Gen'l Agents, CHICAGO.

BORDERING ON POLITICS.

FIAT MONEY AND TARIFF TILTS.

EDW. P. ALLIS OF THE RELIANCE WORKS
VS. HENRY SMITH, MEMBER OF CON-
GRESS FROM MILWAUKEE.

A Weak Argument on a Strong Subject by
Millionaire Allis to which the Apostle of
the Labor Party, Honest Henry
Smith makes a Spirited Reply.

COMMENTS UNNECESSARY. READ AND REFLECT.

Edw. P. Allis has written a letter addressed to his employees under date of Aug. 17, in which he sets forth his ideas upon the political issues of the day. As Mr. Allis is the head of one of the largest millbuilding establishments in the United States, we believe that it will prove interesting to the trade to publish his announced views, but we must confess that Mr. Allis has not produced as strong and able an argument in support of the Protective Tariff question as one might have reasonably expected from one of his years and experience. In view of the fact that Henry Smith, the present member of Congress from Milwaukee, and who is also one of the oldest and best-known millwrights in Wisconsin, has been personally denounced in Mr. Allis' letter as betraying the cause of Labor by voting for the "Mills Bill," we also take pleasure in presenting his reply to Mr. Allis. We present the "Allis Open Letter" and Mr. Smith's reply, without further comment for the edification of our readers. Mr. Allis says:

"I have been asked by many of you for my opinion upon the present political situation, and in view of the great importance of the question itself, whether my opinion is of value or otherwise, it seems best to reply in an open letter to you all.

"As you know, I am a believer in the financial and industrial views of that eminent American thinker and writer upon industrial subjects, Henry C. Cary, and have been a sincere worker in the "Greenback" and "Greenback Labor" parties, which more nearly than any other embodied his principles, and if my vote and influence could establish those principles at this time, it would be so given.

"The underlying sentiment of those principles is, that American labor is the foundation stone of our national life and future greatness, and that to encourage and aid the working and producing classes, whether on the farm, in the workshop or in the office, should be the first duty of the government, and that our legislation should be for our own people and country, and not for or governed by other nations.

"Two leading features of this belief are, first, that the government alone should furnish the currency of the country, whether metallic or paper, and that it should also establish and regulate its volume in the interests of the whole people, beyond the reach of responsible or irresponsible causes, arising from individual or corporate control, or from the exportation or variation in the supply of the precious metals, and second, that the good raw material of our own country should be utilized by and for our own people without damaging competition from the people of different governments and diverse social and economic conditions. Of those two great principles, the Labor party alone at the present time advocates the first, but the success of that party in the approaching election is

an impossibility, and its success even, with the loss of the second of these principles, which it does not endorse, would, I fear, be a fruitless victory.

"The two dominant political parties, one of which must succeed in this election, while alike ignoring the first of these questions, take distinct issue upon the second and it is made the pivotal question of the day, and in the triumph of one or the other of these two parties rests the settlement of this question for many years to come, and the consequent good or ill for a long time to our beloved republic.

"The workingmen of America have many difficulties to contend with, but under present conditions they are gradually acquiring the power to more successfully cope with them, and though the process may be thought slow, it is nevertheless certain that they are constantly bettering their condition, while their brethren across the sea are a vast multitude so steeped in poverty and weakness as to almost abandon hope of a better future. This fact is beyond successful dispute, that whatever ills the American workman has to contend against, his rate of wages is twice or three times that of his European brother, and it is this point of vantage that it is his vital and lasting interest to maintain. It is also of vital interest to the country itself, that it should be maintained, for if American workmen must be reduced to the low rate of wages paid abroad and to the want and misery that naturally follows that low ebb of payment, as evidenced not only by foreign reports, but by the destitute hordes of emigrants now landing upon our shores, then our government of and for the people is a failure and a fraud.

"The only possible way that this difference of wages between our own and foreign lands is and can be maintained, is by the continuation of the policy that made the difference exist, viz.: the exclusion, to a greater or less extent, of the products of that foreign, cheap labor from our shores. The policy which does this is the policy of protection to home industries, and it is the policy which is now being threatened by the present national administration and which is to be passed upon in the approaching election. For the time being, this question dwarfs all others and every other issue sinks into insignificance beside it. * * * It is quite probable that the rate of wages paid, even in America, is not as high as it should be, and I fully believe that the distribution of the products of labor is faulty and that the producer does not get his proper share, but I am equally sure that the road to a better distribution does not lie in reducing the share he now gets. That the effect of foreign competition would be to reduce wages, it is only necessary to apply it to our own case, right here at home.

"Our city is divided by rivers into three important sections, viz.: the East, West and South sides, in the latter of which our works are located. Here we are, 1,500 strong, fully occupied at as high a rate of wages as prevails in the United States in similar establishments, and, whether as high as it ought to be or not, it is twice to three times as high as is paid abroad. Now, suppose a similar establishment should be started upon the East or West side, and for some reason, that establishment could obtain its workmen at materially less wages than we pay on the south side. Since labor represents far the largest per cent. of the cost of our products, you can readily see that it would only be a matter of a short time when our establishment would be compelled to do one of three things: either close its doors, move over to the other side, or reduce its wages to the rate paid on the other side. This result would be inevitable, and there is no escape from it. If our river was broadened to the lake, and the lake extended to an ocean, it would make no difference in the inevitable necessity of change in location, lower wages or failure, and, as a change of location would be impossible, and closing or failure would be no remedy, the inevitable outcome would be lower wages. It is true that the matter of transportation between two distant points enters into the calculation, but communication by water and steam is so close that the

cost of transportation is of minor importance. The great fact remains, that the nations of the world are our competitors, and we must adopt their scale of wages or go out of business in our own country, if we permit their wares to come free among us. * * *

One great claim that is urged for the removal of duties upon imports, in the interest of workmen, is, that under a protective policy, he has to pay a higher price for what he consumes, but admitting this to be true, we must also consider the other truth, that if he pays more, he has far more to pay it with. * * *

Another claim is, that more is paid into the treasury than we need, but is it so? Have we more income than we can profitably use? Which of you having a debt of \$1,000 upon his homestead, and a saving of \$100 over and above his living expenses, would consider that amount, laid away to pay on the debt, a bad condition of things? And yet this is precisely a parallel case. Our government has a debt (in round numbers) of a thousand millions, drawing interest and secured by a mortgage on the homes and property of us all, and has an accumulation of a hundred millions toward paying it, to which has been given the alarming title, of a "dangerous surplus." It is a "dangerous surplus" to one, and only one, interest among us and that is, to the holders of our national debt, but they cannot justly complain at its being paid. To the people at large, the surplus and the means of continuing it, is a blessing unparalleled, and while we have a dollar of unpaid debt, there is no such thing as "a surplus" possible, and there is no safety in reducing the means of rapidly extinguishing the debt. Neither would the income we receive necessarily be a burden if there was no debt to be paid, for there are thousands of uses, beneficial to all the people, to which the money could be put. But if our debt were paid and we were in a position to reduce this income, there is a method to do it ten thousand times better than to open our ports to the products of the starvation labor of Europe.

I can only add, that I think our present labor representative in congress, Henry Smith, —with whom I have formerly been in sympathy,—in voting for the "Mills" bill, has betrayed the cause of labor, which he was elected to represent, and that I deem it my duty at the present time, temporarily sinking all other questions,—to be revived at a more auspicious time,—to do my utmost in this election to strengthen the Republican party, which broadly and openly espouses the cause of protection to American industries, and trust that every one of you that loves his family, his home and his country, will do the same. When we have succeeded in rendering permanent our present position of vantage, then we can look forward and strive for other benefits and advances, but if we lose what we now have, our condition will be helpless indeed. EDW. P. ALLIS.

In reply to the above, in answer to a letter written him by the editor of this paper, Mr. Smith sends the following communication:

WASHINGTON, D. C., Aug. 20, 1888.

Editor United States Miller:

I notice that Mr. E. P. Allis has published in pamphlet form an address to his employees giving his reasons why he shall do his utmost to strengthen the Republican party and also about my course in Congress on the Mills Bill. It is a gentle reminder with a cutting edge to his employees that they must vote the Republican ticket this fall.

I propose to show that Mr. Allis is very much mistaken about his statements, and that truth, when that letter was written had gone out for a walk.

Mr. Allis states that \$700,000,000 of pauper made goods were imported in 1867. Now let us see what Uncle Sam's books say on that subject. Total imports for 1867: \$692,319,768. Total free of duty, \$234,221,181. Total dutiable, \$458,098,637. Quite a difference between Uncle Sam's and Mr. Allis' figures. Again we find of that pauper labor on the free list \$3,188,201 for animals for breeding purposes, \$27,025,750; for chemicals, drugs and dyes, coffee, tea and cocoa, \$74,789,014; raw hides and skins, \$24,219,101; silk, raw and manufactured, \$19,642,707; India Rubber, \$18,756,-

788. Bolting cloth, not a yard of which is manufactured in this country, \$271,400. From the above items and figures your intelligent readers will be able to form an idea about pauper labor expended thereon.

Now let us see what that much abused Mills Bill proposes to do. It proposes to place lumber on the free list, which is quite an item in building a mill. It will remove \$2,899,678 tax from the farmer and miller on jute and jute bagging in which 95 per cent. of all the flour that is exported is packed, and all the grain raised on the Pacific slope is sacked. Ninety per cent. of all the jute butts raised in India is used in the manufacture of paper sacks in this country. It is an Indian plant. It proposes to put wool on the free list, of which we do not raise by half enough for our own use with all the tariff that now backs it. Take the census reports of 1870 and 1880 and see the Tariff effects on Woolen Manufactures and the employees.

WOOLEN MANUFACTURES IN 1870 AND 1880.

Census reports show the following facts in respect to woolen manufactures in the United States for the above decades:

	1870.	1880.
Establishments.....	2,891	1,990
Capital invested.....	\$98,824,311	\$96,005,564
Hands.....	80,053	80,504
Spindles.....	1,845,496	1,756,740
Wages.....	\$26,877,675	\$25,830,372
Material.....	\$96,432,601	\$100,815,611
Product.....	\$155,405,584	\$160,606,721

Comment is unnecessary. The facts tell the whole story.

In conclusion I will say that not one article that is manufactured in Mr. E. P. Allis' shops is affected by the Mills Bill. When Mr. Allis penned that manifesto he must have suffered with dyspepsia which warped his mind like a shaft that has passed through a fire in a flour mill.

Truly, yours
HENRY SMITH,
Millwright and M. C.

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has in so short a period gained the reputation and popularity enjoyed by the WISCONSIN CENTRAL LINE. From a comparatively unknown factor in the commercial world, it has been transformed to an independent, influential, grand Through Route, with magnificent depots, superb equipment and unsurpassed terminal facilities. Through careful catering to details, it has won for itself a reputation for solidity, safety, convenience and attention to its patrons, second to no railroad in the country. Pullman sleepers, models of palatial comfort, dining cars in which the cuisine and general appointments are up to the highest standard, and coaches especially built for this route, are among the chief elements which have contributed towards catering successfully to a discriminating public. Located directly on its line, between Chicago and Milwaukee, and St. Paul and Minneapolis, and Chicago and Ashland and Duluth, are the following thriving cities of Wisconsin and Michigan: Burlington, Waukesha, Fond du Lac, Oshkosh, Neenah, Menasha, Stevens Point, Chippewa Falls, Eau Claire, New Richmond, Hurley, Wis., Ironwood, Mich., and Bessemer, Mich.

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EACH WAY
BETWEEN
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Appleton and Green Bay.

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CHICAGO, MILWAUKEE,
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etc.
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At Neenah, with W. O. Line.
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W. R'y.
At Forest Junction, with M. L. S. & W. R'y.
At Green Bay and Ft. Howard, with G. B.
W. & St. P. R. R. and Stage and Boat for Sturgeon
Bay.
At Oconto Junction, with M. L. S. & W. R'y
for Oconto.
At Menominee, with C. & N. W. R'y.
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THE WINTER WHEAT MILLERS' COMBINE.

A Necessity of the Peculiar Developments of the Trade.

GOOD FOR ALL—BOTH GREAT AND SMALL.

In a recent communication, Mr. Alex. H. Smith, of St. Louis, secretary of the Missouri Millers' Association, and member of the Executive Committee of the Millers' National Association, writes on the above subject as follows:

"The press has noted and commented on the proposed millers' or flour trust, which, in fact is not a trust in the sense in which the term is obnoxious, but simply an effort by co-operation to correct abuses and to save the industry from destruction. To explain the present situation, which prompts the movement, it will be necessary to briefly review the changes that have taken place in the manufacture and marketing of flour within a few years. St. Louis was the leading milling centre. Her flour was deservedly regarded as the best in the world, and was sold largely to the four quarters of the compass, north to Minnesota, before that territory produced wheat; west to Missouri and Kansas and other territory; south to New Orleans and thence to Mexico, Cuba, Texas, and to all the states reached by coast or river craft, and east to Boston, New York and Philadelphia, when those cities would distribute the products of the West to all the Eastern States. Time and population developed that Minnesota and the Northwest could raise wheat. The "hard life" variety proved the most productive, and the effort to make good flour from inferior stock, according to the then methods of milling, forced the importation, development and perfecting of the midlings purifier, by the use of which a large percentage of flour previously ranked as inferior was raised to superior to any other, whether winter or spring wheat, but it is a notable fact, as indicating what a change has been made, that the first shipment of this improved flour was made from Minnesota to New York under a St. Louis brand. A revolution in milling followed. Mills multiplied in Minnesota and the Northwest, wheat raising was stimulated, railroads built to reach this new trade, large profits resulting for years before the winter wheat mills, not being driven thereto by the quality of their wheat, saw the necessity of also changing to the new system. Meantime population and production westward had increased, and mills were built to supply their home wants and leave a surplus with which to reach out for trade in competition with St. Louis. The same thing occurred East and South.

"Then the railroads, which had previously held the principal Eastern cities as chief distributing centers, through commission merchants, few in number, changed their system of rate-making, dividing the East into New York and Boston points, to which the same rates were made to nearly all interior stations. This, backed up by yearly increased milling, led, first, to sending traveling men out to sell flour, and culminated in local brokers everywhere, through whom flour is sold, thus substituting thousands of active, aggressive competitors, pushing sales everywhere, in place of the conservative commission merchants of the business centers, who placed the millers' surplus not sold at the mill door.

"After the mills all over the country had accepted the purifier and adapted their mills thereto, came a more sweeping revolution in the substitution of rollers for the traditional mill-stones, and during the past eight years all the mills of the country of any note have been entirely rebuilt on this later system, including all sorts of improved bolting and other devices, as necessary or experimental adjuncts. The aggregate cost of all these changes has been enormous; the result has been to raise the quality of the product, increase competition and reduce profits. The general quality of standard grades made by different mills has become so nearly equal in merit that in pushing for trade millers have first shaded prices, then terms, until buyers had become dictators of both, and the trade

being controlled by brokers, whose constant representations to their principal have been that somebody else was making lower prices or looser terms, which had to be met to make sales. This had continued until it became unbearable, and the St. Louis millers and others adopted an agreement as to terms, and as these were reasonable the trade has accepted them as mutually satisfactory.

"Now it is proposed to go further, and to establish minimum prices from time to time, and even to restrict production, if need be. The speculative system prevailing leaves the miller no control over prices of wheat. He must take it or leave it at whatever prices the bulls or bears make. He converts speculative raw material into a non-speculative manufacture, the price and rate of the product of which he now proposes for the first time to control to the slight degree necessary to save himself from destruction. Clearly he can not go further. If he could and did undertake to make an unreasonable profit, more competing mills could and would be quickly added to the too many we have now. Is it business to sell flour at a loss or without some profit? Should flour be made when our markets are already overstocked? Who, if not the miller, should control the milling business? The St. Louis millers have recognized for some years the peculiar difficulties of their situation, owing to partial or entire failure of tributary crops, continued speculation in wheat, occasional corners, holding prices above the level of other markets for months at a time, which, together with railroad discrimination, has yearly restricted our trade to a smaller and more hotly contested area. They have made repeated efforts to correct these general evils without much effect. They have years ago appealed to the Central Traffic Association and trunk line roads for such rates as would enable us to stay in the New England and export trade on a parity with Minneapolis, pointing out the prospective loss of trade to themselves, since realized by the completion of the "Soo" road and its Canadian connections. We have demanded and been refused equal rates of sack and barrel flour and wheat to the Southeast and wheat rates on flour to the Southwest. Now we realize that, with others similarly situated in the winter wheat belt, we must, if possible, at least control ourselves and limit our business to a moderately profitable basis. We repudiate the only alternative—to wit: the brutal doctrine of the "survival of the strongest, that the big ones shall freeze out the little ones." We propose mutual support as preferable and more honorable than mutual destruction. We do not intend to devote capital and energy to our legitimate business without fair remuneration.

"If we can be the medium of distributing better prices to farmers for wheat without imposing on consumers, we shall be glad to do so, but if in the future, as in the past, an unscrupulous gang of grain gamblers monopolize the stock of wheat and undertakes to extort through us unreasonable prices from the consumers, we shall feel that the time has come to shut down our mills and let the bulls and bears gore and claw each other; if to the death, we will gladly attend the funeral. The buyers will, if the proposed plan is adopted and carried out, have no reason to complain. Prices will be steadier, and reasonable profits better assured. There will be less forcing of flour on markets already sufficiently supplied. The competition will be in improved quality, the main reason then for preferring one brand to another, price and terms being equal.

"Noting some references to the impracticability of the plan on account of the vast number of mills (8,000) in the winter wheat belt, the fact is that less than 500 mills make the bulk of the flour shipped away from the point of manufacture, and if one-half of these will unite and keep faith with each other they can control the business to the extent desired. There is no thought of destroying the individuality so marked among millers, and which is beneficially felt in any milling point. His pledge of honor to adhere to the mutual agreement to which he voluntarily subscribes is sufficient. He does not

divide profits with any other miller, but he simply undertakes to conduct his business on a basis that makes it possible for him and others in the same line to earn reasonable profits. It is the largest manufacturing interest in the country, and probably the only one, large or small, which has not long since organized for business, and the wonder is that it has been so long delayed."

Under the head of "Platform," the following appears in italics: "Absolute submission to authority, of which the individual member is only an integral part."

The powers of the Board of Directors are defined thus:

They may from time to time fix minimum cash prices for standard grades of flour, under which no member of the Association shall sell or permit to be sold any flour made or owned by him.

They may order a proportioned reduction or an entire suspension of manufacture for a specified period.

They may contract with the brokers or agents to act at stipulated rates for members of the Association.

They shall meet at least once a week, and oftener if occasion may require, and any director who cannot attend such meeting shall telegraph such prices as he thinks proper for the consideration of attending directors; and whatever prices are agreed on shall be mailed or telegraphed simultaneously to each member, and such prices shall remain in force until similarly changed.

As to the prices of flour and wheat the rules say:

Members must add to minimum cash prices such charges as are incurred for selling, and for discount if sold on time, such time in no case to exceed thirty days.

Mills at local points tributary to St. Louis, Detroit or Toledo shall not pay over the current prices for same grades in those markets, less two-thirds of the freight rate thereto.

All sales of less than car-lots must be at least 100 higher than current minimum prices.

No sales for shipment shall be made on open account, except to places which have no bank or banker.

Sales for cash must be closed by sight draft, payable on presentation, regardless of arrival of goods.

Thirty-day sales must be closed by draft, date of shipment, which buyer must accept regardless of arrival of goods.

If sales are made on thirty-day quotations, and buyer prefers to pay cash and so states at date of order, the seller may allow not to exceed 1 per cent. for sight draft.

A meeting has been called to be held at the Lindell Hotel, St. Louis, on Friday, August 31, and from the unanimity manifested at the meeting of July 27, and from the tenor of daily correspondence, Mr. Smith says the success of the movement is reasonably certain.

THE UNITED STATES MILLER is the ONLY milling journal in America that has published Five editions of 10,000 copies each, during the year 1888, and is ABLE and WILLING to PROVE it to any advertiser. We feel justified in continuing to issue the 10,000 right along. Our journal is not a large one, but it is a good one and reaches nearly all the flour mills and grain elevators in this country, and a good many beyond seas. Advertisers should make a note of it.

A CORRESPONDENT in Marshall, Minn. writes as follows: Marshall is still without the steam flouring mill that we so much need, and is anxious to confer with parties who are looking for a paying location for such a mill. The wide extent of country which a good flouring mill could make its market from here with our several railroads and railroad connections, and the large quantity of wheat annually shipped from here, ought to make this an inviting location for such an enterprise.

EXPORTS OF WHEAT AND CORN.

The following shows the exports of wheat and corn, including wheat in flour, from all American ports and Montreal, from September 1 to August 4, for the years named:

	Wheat, bu.	Corn, bu.
1887-8.....	92,025,000	23,035,000
1888-7.....	149,312,000	38,890,000
1885-6.....	91,730,000	61,350,000
1884-5.....	114,065,000	50,270,000
1883-4.....	99,641,000	35,407,000
1882-3.....	122,890,000	43,800,000
1881-2.....	119,364,000	26,180,000
1880-1.....	156,538,000	80,013,000
1879-80.....	176,000,000	101,498,000
1878-9.....	150,000,000	77,947,000

Thornburgh

— AND —

Glessner,

Chicago.

ELEVATING

— AND —

CONVEYING MACHINERY.

[When writing for Catalogue, etc., mention this paper.]

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THE "UNITED STATES MILLER" TO MAY, 1889, AND

50 Charming Complete Novels

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To Foreign Countries \$2.00. (8 Shillings English) Orders must be sent to us before Dec. 1, '88.

These Novels are printed in pamphlet form, on good paper. They would cost you in the form of "Seaside" or other libraries, \$10.00. If you do not want to read the books yourself, divide them up among your friends. The regular subscription price of the U. S. MILLER alone is \$1.00 per year, and it is worth the money. We have been able to make a good bargain with an Eastern publisher and propose to give our subscribers the benefit of it. The following is the list of novels:

A Bartered Life. By MARION HARLAND.
An Old Man's Sacrifice. By Mrs. ANN B. STEPHENS.
A Wicked Girl. By MARY CECIL HAY.
A Low Marriage. By Miss MULOOK. *Illustrated.*
Under the Lilacs. By the author of "Dora Thorne."
The Strange Case of Dr. Jekyll and Mr. Hyde. By R. L. STEVENSON.
The Lawyer's Secret. By Miss M. E. BRADDON.
Fair but False. By the author of "Dora Thorne."
The Nine of Hearts. By E. L. FARJEON.
Doris's Fortune. By FLORENCE WARDEN.
A Playwright's Daughter. By Mrs. ANNIE EDWARDS. *Illustrated.*
Forging the Fetters. By Mrs. ALEXANDER.
The Poison of Asps. By FLORENCE MARRYAT.
Moat Grange. By Mrs. HENRY WOOD.
Agatha's History. By MARGARET BLOUNT.
Out of the Sea. By CLARA AGOSTA.
The Story of a Storm. By Mrs. JANE G. ADSTIN.
The Evil Genius. By M. T. CALDWELL.
The Mystery at Blackwood Grange. By MAY AGNES FLEMING.
The Last of the Ruthvens. By Miss MULOOK. *Illustrated.*
The Merwick Farm Mystery. By WILKIE COLLINS. *Illustrated.*
Out of the Depths. By HUGH CONWAY.
Retribution. By MARGARET BLOUNT.
A Tale of sin. By Mrs. HENRY WOOD.
A Fortune Hunter. By ANNIE THOMAS. *Illustrated.*
In Cupid's Net. By the author of "Dora Thorne."

Wedded and Parted. By the author of "Dora Thorne."
The Knightsbridge Mystery. By CHARLES READ. *Illustrated.*
Ingledew House. By the author of "Dora Thorne."
A Fatal Crime. By "THE DUCHESS."
Rose Lodge. By Mrs. HENRY WOOD.
A Bridge of Love. By the author of "Dora Thorne."
The Fatal Marriage. By Miss M. E. BRADDON.
A Queen Amongst Women. By the author of "Dora Thorne."
The Hitchford Bequest. By HUGH CONWAY.
The Curse of Carew. By the author of "Dora Thorne."
A Shadow on the Threshold. By MARY CECIL HAY.
The Fatal Lilies. By the author of "Dora Thorne."
Carriston's Gift. By HUGH CONWAY. *Illustrated.*
More Bitter than Death. By the author of "Dora Thorne."
Miss Mrs.? By WILKIE COLLINS. *Illustrated.*
In the Holidays. By MARY CECIL HAY.
The Romantic Adventures of a Milkmaid. By THOMAS HARDY.
A Dead Heart. By the author of "Dora Thorne."
Dark Days. By HUGH CONWAY.
Shadows on the Snow. By E. L. FARJEON.
At the World's Mercy. By FLORENCE WARDEN.
Called Back. By HUGH CONWAY.
Mildred Trevanion. By "THE DUCHESS."
The Grey Woman. By Mrs. GABRIEL. *Illustrated.*

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1888.

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Send the UNITED STATES MILLER for one year and 50 Novels, post paid, for which find enclosed One Dollar.

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[Would be pleased also to have you mention any particulars about your mill or elevator, capacity, power, system, etc., and the name of Head Miller.]

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Shells wet or dry corn.
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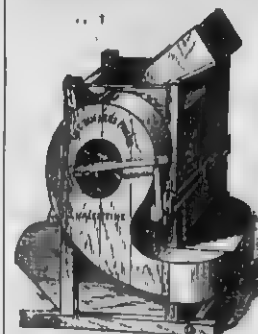


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We are the first introducers of the Chilled Iron Rollers for milling purposes, and hold Letters Patent for the United States of America. For full particulars address as above.
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IT IS THE
BEST CORN SHELLER
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IT IS
Simple in Construction
Almost Noiseless,
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HUNDREDS ARE IN USE.

For descriptive circular, price list, etc., Address

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CAWKER'S AMERICAN FLOUR MILL AND ELEVATOR DIRECTORY FOR 1888, issued March 8, is meeting with much praise from all departments of the trade. While not claimed by the publisher to be perfect, it answers FULLY the requirements of the trade. It is the only list published. The demand is limited and the price (Ten Dollars per copy) is cheap, considering the labor required in compiling, printing and selling. It contains lists of flour mill and grain elevator owners, miscellaneous kinds of mills such as corn, rye, oatmeal, rice and feed mills, millwrights, flour brokers and dealers in various sections of the United States and Canada, and a good list of European flour and grain importers. Kind of power used, rolls or stones, capacity and millers supposed to be worth \$10,000 or more are indicated in thousands of cases.

[Written for the UNITED STATES MILLER.]

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POWER TRANSMISSION MACHINERY.

A. J. SHAW

III.

The ideal line shaft would be made in one piece of varying diameter, the strength at each point being proportioned to the power to be transmitted. But while it is possible to make a shaft which shall fulfil these conditions practical considerations relating to convenience in handling, and economy of manufacture, demand that it shall be made up of separable sections of convenient length. In practice these sections vary in length from eight to twenty feet. In cotton mills and other heavy timbered buildings, the length is determined by the length of the bays, and usually varies from twelve to sixteen feet.

An almost numberless variety of couplings has been devised for uniting these separate sections into one system, many of them worthless. But few varieties are in general use, or are at all known outside of the localities in which they were invented.

The flange coupling shown in Fig. 1, while expensive, clumsy and possessing many defects, is, probably more universally used than any other form. It has the merit of not requiring special machinery for its production, and consequently, comes within the capacity of any small shop. It also possesses the merit (?) dear to the average shop owner, who sells machinery of this class by the pound, of being able to absorb a great weight of iron without showing by its appearance any signs of undue congestion.

When well made and fitted, it is extremely rigid, the joint being perhaps the strongest part of the line.

The most serious disadvantages of the flange coupling, are: that each half must be fitted separately to its own section of shafting, keyed up in place and turned true, that it can be transferred to no other part of the line, and even if taken off from, and unkeyed on its own seat, is often apt to be untrue.

To put pulleys on line shafting fitted up with flange couplings, is a comparatively slow and difficult piece of work. The bolts connecting the two halves must be driven out, the whole line moved endwise far enough to allow the centering bit to be drawn out, the key driven out, and the coupling driven off the shaft with a sledge or pulled off with a jack. For light shafting this operation not unfrequently results in springing the shaft. It is difficult to avoid hitting the shaft with the sledge, and even when the shaft is quite heavy a very few blows will penetrate sufficiently to throw it appreciably out of truth.

With all these disadvantages, the flange coupling has a strong hold and will probably find a sale for years to come.

There are no generally accepted rules for the proportions of the flange coupling, each draftsman or pattern maker following his own ideas as to what it should be, which results sometimes in strange monstrosities. They are made with, and without outside flanges, with many small bolts and few large ones, with hubs and webs of all thicknesses.

A set of proportions which has been found to work well in practice and which is fairly economic in material, is given below, the reference letters being given in Fig. 1. The unit in which the dimensions are referred to is

d , the diameter of the shaft. The diameter of the hub is noted in the sketch.

The number of bolts may be the nearest even number to the diameter of the shaft in inches $\times 3$. For instance, if the shaft diameter be $1\frac{1}{2}$ ", the number of bolts would be, $3 \times 1\frac{1}{2} = 4\frac{1}{2}$ " the nearest even number to which is 4.

The diameter of the bolts, b , may be found by dividing the diameter of the shaft by the number of bolts and adding $\frac{1}{4}$ ". The outside diameter of the coupling, D , is determined by the necessity of having sufficient room for the bolt heads between the hub and the outer flange. This space should not be less than four or five times the diameter of the bolt. It will usually be sufficient to make the outside

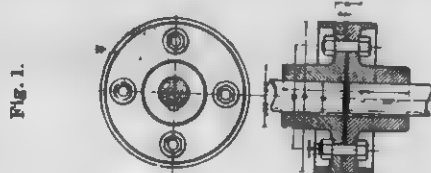


Fig. 1.

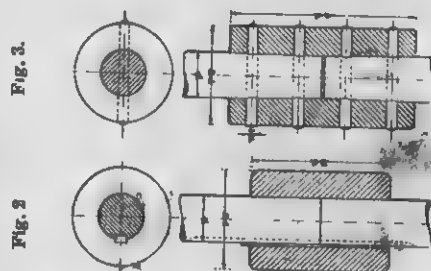


Fig. 2.

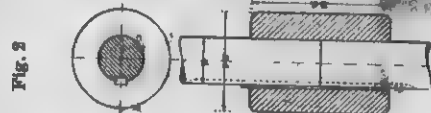


Fig. 3.

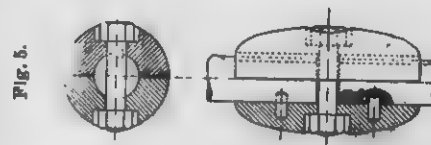


Fig. 4.



Fig. 5.

diameter, D , from five to six times the diameter of the shaft, using the larger multiplier for small shafts.

The diameter of the bolts circle, B , should be such as to locate the bolts equidistant between the hub and the flange.

The thickness of the webs, T , may be two-thirds the diameter of the shaft $\times \frac{1}{4}$ ".

S may be from $\frac{1}{8}$ " to $\frac{1}{4}$ ", according to the size of the coupling.

For shafts in machines, which do not frequently require to be disconnected, an excellent and cheap coupling is shown in Fig. 2. It is a plain sleeve bored to a driving on each shaft, and fastened with a single key, or in some cases with a key at each end. The proper proportions are given in the cut.

A coupling much used in the shoe-manufacturing districts of New England is shown in Fig. 3, which is given principally as an example of "how not to do it." It is expensive, hard to disconnect, not interchangeable, and has but little driving power. Each end of the shaft is turned taper, usually to a taper of an half-inch to the foot, and on this end the coupling is driven, pin holes put through, and taper pins fitted. A scale of proportions

is given in the cut, for the benefit of any who may desire to use this coupling, but the writer would say: don't.

A form of coupling which cannot be excelled for durability, convenience and simplicity, is shown in Fig. 4. It consists of a plain sleeve or muff, split at one side, the split drawn together by four bolts, with a key on the side of the hole opposite the split. Its only drawback is that to ensure its success, the shafts must be very nearly the same size, the permissible variation being not over one or two thousandths of an inch. But as there is now no difficulty in obtaining shafting which comes within this limit the objection has not much weight.

The length of the coupling should be four times the diameter of the shaft.

The diameter of the coupling may be three times the diameter of the shaft $\times \frac{1}{4}$ ".

The diameter of the bolts may be found by dividing the diameter of the shaft by 4 and adding $\frac{1}{4}$ ". They should be placed as near the shaft as possible. Fitted bolts are not necessary.

Another form of coupling called the "egg" coupling has been highly recommended by some, but the writer cannot say from personal experience whether it is good for heavy continuous work. It is extremely simple and compact, and if able to stand up to its work, is an excellent coupling. It is shown in Fig. 5. It would require special jigs for drilling the pin holes on the upper side, but further than this could be made without special tools. For light work it would probably be successful.

MILWAUKEE ITEMS.

MILWAUKEE TO HAVE CRUDE OIL.—For some time past a party of engineers have been engaged in examining the country south of Milwaukee and running a line southward toward Chicago. It has just been learned that the party is in the employ of the Standard Oil Company, and that the purpose of their explorations is to locate a pipe line for the transmission of oil from Chicago to Milwaukee. Several parties are engaged in the field between Milwaukee and Chicago. It is evidently the intention of the company to extend lines to other Western cities.

THE National Association of Stationary Engineers will hold its annual convention in Milwaukee, Sept. 4. It is predicted that it will have the largest attendance of any convention heretofore held, as many matters of great importance are to be considered.

FAUSTIN PRINZ, of Faustin Prinz & Co., has spent some weeks at Mt. Clemens, Mich., undergoing treatment for rheumatism. He has returned much improved in health. Orders from all parts of the country for his cockle separators are pouring in, and the works are kept busy to supply the demand.

MR. MCGILL, president of the Richmond Manufacturing Co., Lockport, N. Y., has recently spent a few days in Milwaukee, looking after his company's affairs, pending the absence of Mr. Gilbert, who has gone to California for his health.

MR. NORTHWAY, of the Willford & Northway Mill Furnishing Co., Minneapolis, Minn., spent a couple of cool August days in Milwaukee. His company are doing a good deal of business with Wisconsin millers.

THE SPENCERIAN BUSINESS COLLEGE.—This institution, founded in Milwaukee in 1868, has completed its first quarter of a century, and is beginning its twenty-sixth year. Its work in the preparation of young men and women for business pursuits has gained for it an enviable reputation at home and abroad. It admirably supplements other schools by furnishing young people just what they need to qualify them for business pursuits to which it introduces them. The fact that it leads directly to business is one reason for its popularity with that large and intelligent class who judge a school by this practical standard of usefulness. The SPENCERIAN BUSINESS COLLEGE is thoroughly progressive and up to the demands of business.

FOREIGN ITEMS.

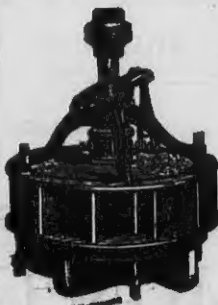
G. CORONAKI, Constantinople, Turkish Empire, has recently had built for him a complete automatic roller mill. The work and machinery were furnished by an Austrian firm.

ACCORDING to the final report of the Indian agricultural department, the total product of this year's wheat crop is estimated at 7,148,628 tons, against 6,244,441 tons last year, the difference being 904,187 tons in favor of this year. This would mean, under ordinary circumstances, a greatly increased surplus for export, but the report states that stocks of old wheat and of food stuffs generally were so reduced that a large portion of this surplus would be required to reconstitute these stocks.

THE consumption of wheat in France in late years has averaged about 380,000,000 bushels, annually, for all purposes. The area planted is about 17,000,000 acres, requiring about 80,000,000 bushels. This season's crop of wheat is not likely to exceed 250,000,000 bushels, according to current advices, which implies that 80,000,000 bushels will be required from other countries during the year, to maintain the usual supply.

THE stupendous plan of supplying the city of Liverpool with water involves the removal of a whole Welsh village, including woods, cottages, churches, etc., this immense space to be devoted to a reservoir four and a half miles long by half a mile to a mile broad, and eighty feet deep. There are to be three lines of pipe, each sixty-eight miles long, with filtering beds and secondary reservoirs, and the cost of the aqueduct alone is estimated at \$15,000,000.

Improved + Walsh + Double + Turbine



This wheel has a perfect fitting cylinder gate and draft tube combined, and allows no water to escape when closed.

LOWER GUARANTEED

equal to any wheel on the market using equal amount of water. Address for particulars.

B. E. & J. SANFORD,

Plum & Iron Works,
Sheboygan Falls, Wis.

THE publisher of the UNITED STATES MILLER is desirous of having the names and addresses of Head Millers, Millwrights and Head Engineers in all mills having a capacity of 150 bbls. per day or more.



BODMER BOLTING CLOTH

CELEBRATED FOR

STRENGTH, DURABILITY AND EVENNESS OF MESH.

THIS CLOTH HAS STOOD THE TEST OF YEARS AND HAS NEVER FAILED TO GIVE SATISFACTION.
ONCE USED NO OTHER BRAND WILL BE ACCEPTED.

CLOTHS MADE IN A PERFECT MANNER AND SURE FIT GUARANTEED. WE HAVE BEEN APPOINTED SOLE AGENTS IN CHICAGO FOR THE BODMER BOLTING CLOTH. WRITE FOR DISCOUNTS, ETC.

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PRINZ Patent Improved Cockle Machine.

The Most Durable, Simple and Efficient Machine for the purpose on the market.

CENTENNIAL MILLS,
EVANSVILLE, IND., June 14, 1887.
FAUSTIN PRINZ & CO., Milwaukee, Wis.

GENTLEMEN:—Enclosed please find check in payment of Cockle Machine sent us May 26, 1887. The Machine does its duty.

May 23rd, 1888.
The Cockle Machine you sold us a year ago is doing its work as well now as it did in the start and has not cost us a dime for repairs yet.

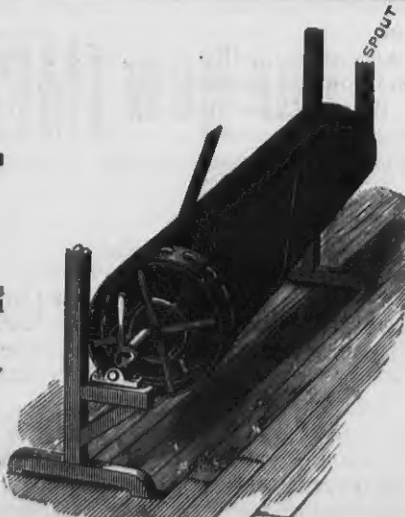
Respectfully yours,
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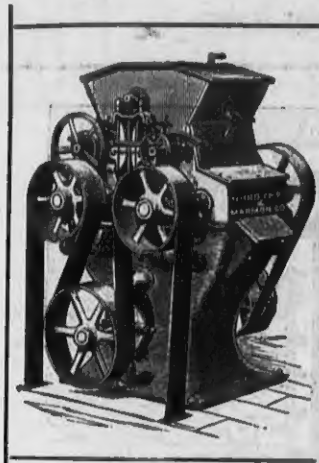
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MILL MACHINERY MANUFACTORY

ESTABLISHED
1851.

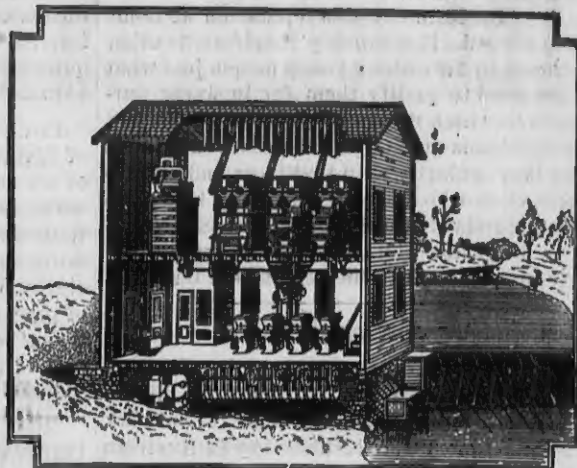


Complete large or small Roller Mills, with power included, furnished in one contract and price, using our Automatic Feeding Roller Mills and new style Round Reel Flour Dressers, and making a compact and easily set up outfit.

... WE ALSO MAKE A SPECIAL ...

FRONTIER Roller Mill

Warranted, costing in running order, including power and building, only \$4,000.



All Machinery of the Highest Grade, and our Prices Very Reasonable.

All are invited to state their wants and get our low proposals, either for new mills or to remodel buhr mills. Send for new and interesting circulars.

OUR ROLLS ARE LICENSED BY THE C. R. M. CO.

NORDYKE & MARMON CO., INDIANAPOLIS,
INDIANA.

The Case Improved Centrifugal Reel

The Finest Constructed and Most Satisfactory Working Machine Yet Built.

Easy Running.

Great Capacity.

The Finest Work.

Speckless Head.

Superior Cloth Cleaner.

Slow Motion.

Takes But Little Power. Small Space Required.

Automatic Feed.

Superior Scalping Device.

Over Loading Avoided.

Our New IMPROVED ROUND REEL CENTRIFUGAL

HAS BEYOND QUESTION MORE ACTUALLY SUPERIOR FEATURES AND FEWER DEFECTS THAN ANY OTHER CENTRIFUGAL MANUFACTURED.

WRITE US FOR PRICES AND FURTHER INFORMATION.

Estimates on Flour or Corn Meal Mills on "Long" or "Short" Systems Carefully Given.

YOUR CORRESPONDENCE IS SOLICITED.

THE CASE MANUFACTURING CO.,

COLUMBUS, OHIO.

When writing to us please mention the UNITED STATES MILLER.

The Jonathan Mills Manufacturing Co.

MANUFACTURERS OF

SPECIAL FLOUR MILL MACHINERY.

WE MAKE THE **Jonathan Mills Universal Flour Dresser** OUR LEADING SPECIALTY.

THIS Machine has built for itself a National Reputation solely through its Superior Merits, and stands to-day a Peer to everything in the bolting line, not alone in **Flour Milling**, but for **Buckwheat, Corn Meal, Electric Carbon, Dry Lead for Paints, Salt, Sugar, Foundry Facings, Ground Bone and Soapstone.**

We carry a full line of **Heidegger & Co.'s** Celebrated **Crown Silk Anchor Bolting Cloths and Grit Gauzes.** These Cloths are famous the world over for their great strength and evenness of count.

We have the most experienced cloth makers, and can insure you as good making up of your cloth as can be made anywhere. GIVE US A TRIAL ORDER.

The Empire Manufacturing Company furnish us with White Special Webbing that is very strong, pliable and much less elastic than colored webbing or ticking. By favoring us with your cloth orders for any style of Reel or Purifier, you can rely on getting Superior work at satisfactory prices.

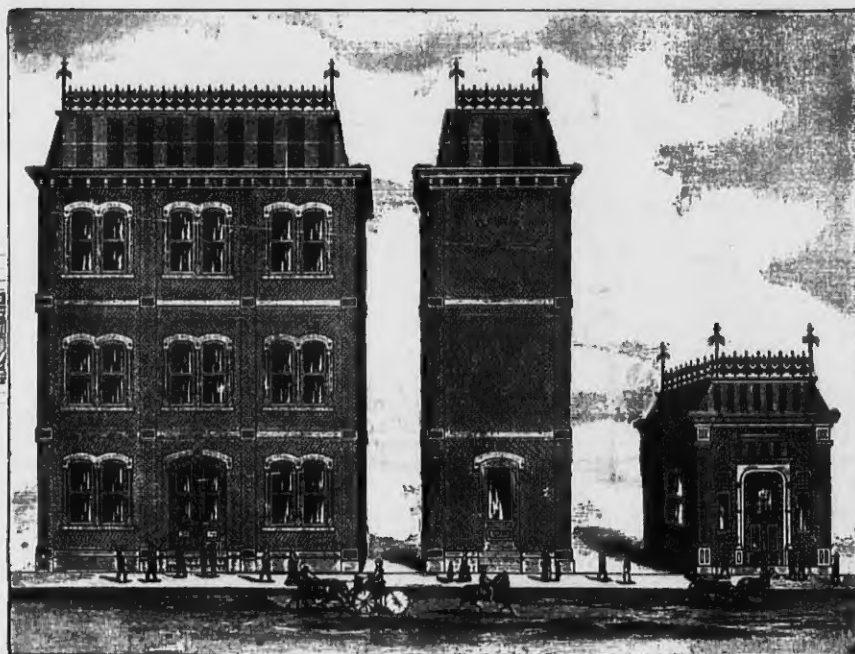
We also furnish the very best **Wire Scalping Cloths** made up to fit any kind of Reel.

We have issued a fifty page pamphlet that will interest every one in the Milling business. Write for it and please mention the UNITED STATES MILLER when you write.

WE EARNESTLY SOLICIT YOUR CORRESPONDENCE AND TRADE ADDRESS

THE JONATHAN MILLS M'F'G CO., CLEVELAND, OHIO.

THE GEO. T. SMITH CENTRIFUGAL REEL



INTERNATIONAL MODEL MILL.

BLISH MILLING CO.

Seymour, Ind., Aug. 8, 1888.

Messrs. GEO. T. SMITH M. P. CO.,

JACKSON, MICH.

GENTLEMEN:—Replying to your inquiry of the 6th inst., as to our opinion of your Machines and System compared with other Machines and Systems, as shown by the work in our mill, would say, that have had no experience with any make of Reels other than yours, and the old fashioned long Hexagon, between which, of course, there is no comparison. However, if anybody makes a better Reel than yours, we would like to see it. This is now our third crop for our present mill; all your Reels are in apparently as good order as when new. The mill was built to make 150 barrels, and we did run her at this capacity in the start, with the addition of more grinding capacity, but without adding one iota to the Bolting System. Are now putting out 260 barrels per day, are having no trouble, and in fact, never had any trouble in selling all the flour we can make, and it is a rare thing for us to be within three weeks of our booked orders. Judging then by the record of our mill, we would say there is no better Reel made than the "GEO. T. SMITH CENTRIFUGAL."

Respectfully yours,

BLISH MILLING CO.

Resolution Adopted by the Millers' National Association at Buffalo, June 14, 1888.

That this association extend its thanks to Mr. Geo. T. Smith for his magnificent stroke of enterprise and genius in placing upon the streets of Buffalo the unique and beautiful Model Mill of the Smith Purifier Co., which has been a source of pleasure to hundreds here and which shows to the world

**The Extraordinary Point of Perfection reached by
this Company,**

to whose genius, enterprise and ability the manufacturers of flour are forever indebted.

Geo. T. Smith Middlings Purifier Co.,

JACKSON, MICH.

Canadian Shops, Stratford, Ontario.